WILAYAH: The International Journal of East Asian Studies
Vol. 14, No. 1, 2025, pp. 34-49
doi.org/10.22452/IJEAS.vol14no1.4

REVEALING THE ENVIRONMENTAL IDEOLOGY BEHIND ANTI-NUCLEAR DISCOURSE IN JAPAN POST FUKUSHIMA 3.11: CRITICAL DISCOURSE ANALYSIS OF JAPANESE ALTERNATIF NEWSPAPER *HANGENPATSU SHINBUN*

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Abstract: Anti-nuclear discourse in Japan gained a momentum after the Fukushima nuclear power plant accident in 2011. The impact of nuclear on the environment is one of the issues widely concerned in the anti-nuclear discourse. However, the ideological orientation of environmental perspectives within Japan's anti-nuclear discourse remains underexplored. This study aims to examine environmental ideology embedded in anti-nuclear discourse by analyzing articles from *Hangenpatsu Shinbun*, an alternative anti-nuclear newspaper in Japan by using critical discourse analysis. The theoretical framework used as a lens to guide the research is the environmental ideology theorized by Julia Corbett. The findings reveal that the environmental ideology of anti-nuclear discourse in the media is predominantly anthropocentric and conservationist, with limited representation of ecocentric or ecological ideologies. This anthropocentric bias suggests that the discourse prioritizes human interest, often subordinating environmental concerns. Such a perspective bias perpetuating environmental policies that fail to address long-term sustainability. To mitigate this limitation, anti-nuclear discourse in Japan should adopt a more ecocentric approach, such as deep ecology. This shift would recognize the intrinsic value of nature and promotes a holistic, sustainable relationship between humans and ecosystems, contributing to the development of more balanced environmental policies for the future.

Keywords: Anthropocentric, Anti-nuclear discourse, Ecocentric, *Hangenpatsu Shinbun*, Japanese nuclear power plant

INTRODUCTION

The Fukushima nuclear power plant (NPP) unit-1 accident that occurred in March 2011 resulted in large-scale radiation leaks and became one of the worst nuclear disasters in history. The impact was far-reaching, affecting the social life of the Japanese people, causing mass evacuations, changes in energy policy, and prompting intense political discussions about the future of nuclear energy in Japan (Ohto et al., 2017; Zhang & Mclellan, 2014).

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In addition to concerns about the long-term impact of nuclear energy on humans, an issue that is often raised in public discussions is the impact of nuclear energy on nature and the environment, both locally and globally (Bachev, 2014). Globally, the environmental impact of nuclear energy is not a novel issue. Global pro and anti-nuclear discourses often address environmental concerns from various perspectives. Global views on the impact of nuclear energy on the environment are still dominated by anthropocentric rather than ecocentric views, focussing primarily on the impact of nuclear on human health (Oughton, 2013). Radiation risks are typically assessed based on their effects on humans, while environmental damage is only considered only in so far as it affects human needs, such as contaminated water or food. This approach tends to be short-term, unequal, and focuses more on the immediate threat to the current generation of humans (Nolt, 2015; Burchett, 2014).

However, over time, the global orientation towards environmental issues has gradually shifted towards ecocentric, which recognizes the intrinsic value of ecosystems and non-human life forms. The impacts of nuclear energy on plants, animals, and ecosystems began to be viewed as important on par with humans (Norton & Thompson, 2014; Kopnina, Washington, Taylor, & Piccolo, 2018). Movement such as the "Nevada-Semey" in Kazakhstan exemplify this shift, from a focus on the health of humans affected by nuclear tests to a concern for the restoration of ecosystems damaged by nuclear activities (Bargheer, 2018; Chambru, 2020). This ideological shift has led in broader public policies, including the suspension of nuclear projects and increased emphasis to biodiversity and ecosystems. The movement has also broadened its base of public support through advocacy for greener renewable energy. These changes reflect that global attention is shifting towards a more ecocentric view, which values all components of nature, not just those affecting humans (Baigorri, Caballero, & Chaves, 2012; Burkett, J., 2012).

If the global perspectives are evolving in this direction, what is the environmental orientation of the anti-nuclear discourse in Japan? This research stems from the limited understanding of how anti-nuclear discourse in Japan perceives the environment, particularly following the Fukushima nuclear accident in 2011. It is noteworthy that the production of anti-nuclear discourse in Japan has increased rapidly especially between 2011 and 2015 after the Fukushima disaster. Issues such as nuclear safety and widespread protests across various regions were prominently covered by alternative media (Shin, 2017; Vivoda & Graetz, 2015).

This study assumes that the environmental ideology underlying Japan's anti-nuclear discourse can be identified through the analysis of anti-nuclear narratives presented in text articles published by alternative media. Alternative media in Japan has served as platforms for anti-nuclear discourse, as such viewpoints are often underrepresented in mainstream media (Okumura et al., 2021). One prominent alternative media actively providing a platform for anti-nuclear discourse in Japan is *Hangenpatsu shinbun*. This media is published by the anti-nuclear movement organizations *Genshiryoku Shiryou Jouhoushitsu* or Citizen's Nuclear Information Center (CNIC), that has been active for more than three decades since its founding in 1974 as a pioneer and a central hub for the anti-nuclear movement in Japan (Avenell, 2012, 2017; Aldrich, 2012, 2013, Wienmann, 2018). Consequently, the media and discourse produced by CNIC are considered representative of anti-nuclear perspective in Japan.

This study aims to explore the environmental ideology of anti-nuclear discourse in Japan as reflected through the alternative media *Hangenpatsu shinbun*. The environmental ideology framework developed by Julia Corbett is employed as an analytical lens to identify various environmental ideological orientations within the discourse. The findings are expected to provide valuable insight into the ideological dynamics driving Japan's environmental movement in Japan. It is also expected to contribute in providing information for determining

future environmental policies related to nuclear energy, humans' society, and the broader relationship with nature and environment.

RESEARCH METHODS

This research uses a quantitative approach supported by a qualitative approach. The quantitative approach is applied by inventorying the corpus data into percentage form, while the qualitative approach is carried out through the process of interpretation and meaning of the corpus data before being processed quantitatively. The research stages were organized as follows: First, data collection. The data corpus used in this study are articles from the alternative print newspaper *Hangenpatsu Shinbun*. The articles taken were from issues from 2011 to 2015. Within this time span, 600 articles were collected, all of which were used as the data corpus. The selection of *Hangenpatsu Shinbun* as a data source is based on the consideration that this newspaper has consistently represented anti-nuclear discourse in Japan and has become the main reference for the anti-nuclear movement in the country since it was first published in 1975. The article is only available in printed form, and access to it is obtained through direct order to CNIC, which is then sent by post.

Second, data analysis**.** The data analysis process began with an in-depth reading of each article in the corpus. Data interpretation was carried out by adopting the *Critical Discourse Analysis* (CDA) method developed by Fairclough, and using Julia Corbett's environmental theory framework. The analysis began by detecting the environmental ideology contained in the text using Corbett's spectrum of environmental ideology. The results of the interpretation of each article were identified, classified, and entered into a recapitulation table in the Excel application. The final result of this recapitulation is the percentage of ideology distribution, which is then complemented by the presentation of representative sentences from several selected articles.

The *CDA* approach used in this research is focused on textual analysis. Through this analysis, the researcher attempts to detect the ideology of the text producer through word choice, grammar, and expressive sentences that express attention to the environment, nature or non-human beings both implicitly and explicitly. According to Fairclough (2015), these elements reflect certain judgments or views that can reveal certain ideologies.

Third, minimize bias in analysis**.** Bias and subjectivity are inevitable in the process of data analysis and interpretation. Therefore, this research involved an iterative process through *focus group discussions* (FGDs) within three researchers. The discussions were conducted on a number of purposively selected articles (45-50 articles) that were considered representative of Corbett's spectrum of environmental ideologies. The articles discussed in this FGD were chosen to validate the researcher's interpretation, so that the results of the analysis can be more objective. Some of the results of these discussions and joint interpretations were then used as an example in result and discussion section of this article.

THEORITICAL FRAMEWORK

Fairclough's Critical Discourse Analysis

Fairclough's CDA employs a dialectical approach that conceptualize discourse is constituted and constitute social practices or realities (Jorgensen, 2002: 60-97). Within social practices, power relations, ideologies, and negotiations of various societal forces are enacted and contested. Unequal or problematic social realities are often reflected through the discourse produced in the social system. To uncover the power relations, ideology, or inequality behind a discourse, Fairclough's CDA framework proposes an analysis on three dimensions: text, discursive practices, and social practices as illustrated in the model below.

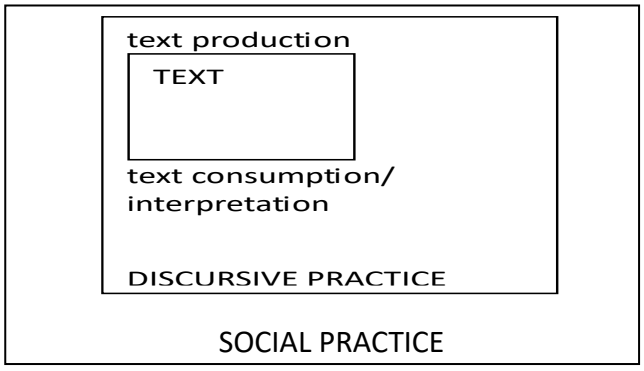

Figure 1. Fairclough's three dimensional model for CDA
(Jorgensen, 2002: 68)

Fairclough implicitly states that text is the "main vehicle" for the transmission of ideologies within discourse. Text analysis of text aims to identifying how ideological elements are embedded through linguistic features such as vocabulary/lexical choices, grammatical patterns, metaphors, and discourse connectives. Language in term is text has three primary functions, each of which may reflect an underlying ideology: experiential value, relational value, and expressive value.

Table 1. Function of Language

Experiencial value	reveals how the experience of the social world is represented in the text. For example, passive sentences can make the agent of the sentence disappear. It can reveal a certain ideology.
Relational Value	reveals the social and power relations constructed through the text. For example, the modality of "must" or "can" can reflect power relations governed by a certain ideology.
Expressive Value	reveals the attitude or social identity of the author of the text towards the reality represented and the evaluation of an issue. For example, positive words indicate support, and vice versa. This expressive value also reflects the ideology of the text producer.

(Fairclough, 2015: 129-133)

To explore the environmental ideologies presents in Japan's anti-nuclear discourse, the researcher focuses the analysis on two of Fairclough's dimensions: text and discursive practice. Within textual dimension, the analysis primarily targets the expressive value of the text, although experiential value and relational value are not excluded from consideration. Articles are systematically analysed for word choices, syntax structures, or metaphors that conveys environmental perspectives, and from this analysis, the researcher interprets how these textual features align with specific environmental ideology.

In parallel, the analysis of discursive practice investigates how the text is interpreted within its broader socio-cultural and ideological context. The interpretation of the text itself is conducted critically, by considering contextual factors and guided by Julia Corbett's conceptual framework of environmental ideologies. For instance, in an article discussing the risks of nuclear radiation, if the narrative focuses solely humans concerns, the ideology operating in the text may be interpreted as leaning towards anthropocentric. By contrast, a broader concern for ecological systems would indicate a more ecocentric ideological stance.

JULIA CORBETT'S ENVIRONMENTAL IDEOLOGY

The spectrum of environmental ideologies outlined by Julia Corbett in her book *Communicating Nature: How we create and understand environmental messages* illustrates the wide range of human perspectives on relationships with the natural world. At one end of the spectrum is anthropocentric, which places humans at the canter and apex of all living things and natural resources. In this view, the natural world is seen only as a resource for human benefit. These resources exist solely to be used and exploited without restriction to fulfil human needs and desires. This ideology also reflects human dominance over nature, where the relationship between humans and the environment is based on resource exploitation.

On the other side of the spectrum, there is ecocentric, which emphasizes equality between all living things, including humans. This view rejects the hierarchy that places humans on top, and describes a more interdependent relationship between humans and nature. In ecocentric ideology, nature and all its components, both living and non-living, have equal intrinsic value. This view is often associated with traditional beliefs, such as Native American ideology and some Eastern religious traditions, which see nature as sacred and intertwined with human life.

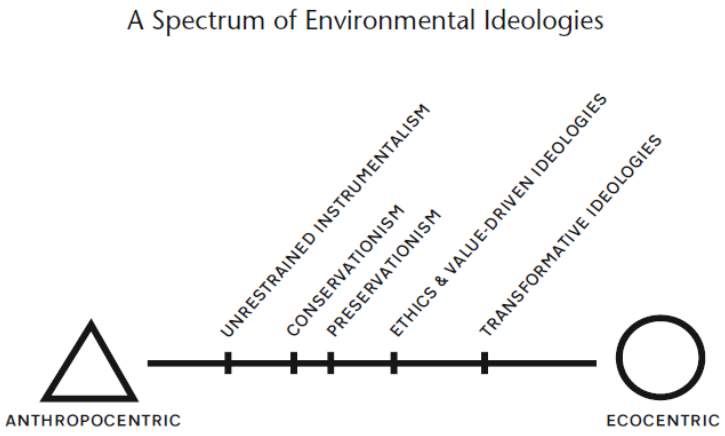

Figure 2. Julia Corbett's spectrum of environmental ideologies
(Corbett, 2006: 129)

Between these two extremes are various other ideologies that make up the spectrum. Unrestricted instrumentalism is the most extreme form of anthropocentric, where nature exists entirely for unlimited human use. Conservationism is more moderate, recognizing that natural resources should be used wisely for human benefit, but still based on utilitarian values. Preservationism goes a little further by suggesting that some parts of nature should be preserved for values other than human utility, such as scientific, aesthetic, or religious values.

Closer to ecocentric are ideologies based on ethics and values, which recognize that some non-human entities have intrinsic value and that humans have a moral obligation to protect them. For example, in the animal rights approach and land-based ethics as proposed by Aldo Leopold, humans are seen as part of a wider biotic community, where the value of natural entities is not only seen from their benefits to humans but from their role in the overall ecosystem.

Finally, on the edge of ecocentric, there are transformative ideologies such as deep ecology and ecofeminism, which propose radical changes in the way humans interact with nature. These ideologies reject the paradigm of human dominance and demand a fundamental overhaul in the social and cultural structures that currently support the exploitation of nature (Corbett, 2006).

RESULTS AND DISCUSSION

The Emergence and Dynamics of Anti-Nuclear Discourse in Japan

The emergence of anti-nuclear discourse in Japan can be traced mainly to the adoption of nuclear technology by Japan as a result of the "Atoms for Peace" program promoted by the United States in 1953. Nuclear, previously associated with the atomic bomb devastation of Hiroshima and Nagasaki, began to be positioned as a potential energy solution to Japan's energy challenges and a symbol of technological progress. Since then the campaign of nuclear energy has been intensively carried out. Nuclear energy was promoted as a clean, safe, and indispensable resource for Japan's energy independence (Yamashita, 2015; Wang, 2023). This campaign then began to be followed by the construction of nuclear power plants in the 1960s. Until 2011, the pro-nuclear discourse dominated, supported by the government, industry, and educational institutions in a group called "Nuclear Village."

Despite the dominance of pro-nuclear discourse, early resistance emerged in the 1950s, triggered by the Lucky Dragon incident in 1954, when a Japanese fishing boat was exposed to radiation from a US hydrogen bomb test. This incident made local communities, particularly those living near nuclear power plants, more aware of the risks of nuclear radiation. However, during subsequent decades, this movement remained marginalized, overshadowed by policies favoring nuclear energy (Low, 2020). It gained momentum during the Chernobyl NPP accident in 1986, but this momentum waned in the absence of significant domestic nuclear crisis.

The anti-nuclear movement only gained great momentum during the Fukushima disaster in 2011. The earthquake and tsunami that struck the Fukushima Daiichi nuclear power plant caused massive radiation leaks, forcing the evacuation of thousands of residents. This event resulted in growing public distrust of the safety of nuclear energy, especially in a disaster-prone country like Japan. Thousands of citizens joined massive protests, demanding the decommissioning of all nuclear power plants and a switch to renewable energy (Shadrina, 2012; Suzuki, 2015; Tsujikawa et al., 2016).

The anti-nuclear movement, which had previously been on the periphery, began to receive major attention. Anti-nuclear discourse has been massively produced again since the 2011 Fukushima disaster. Issues that have been widely discussed include concerns about radiation risks to human health and the environment, criticism of government policies and nuclear energy companies, environmental contamination due to radiation that poses a serious threat to the quality of soil, water, air, and food production, and so on (Kamiya et al., 2015; UNSCEAR, 2014). Solutions offered by anti-nuclear groups include the use of renewable energy, such as solar and wind power, as a safer and more sustainable alternative. Although cost and efficiency challenges remain, renewable energy is considered a long-term solution to end dependence on nuclear energy (Bochorodycz, 2022; Feldhoff, 2013).

The Japanese government and companies that own nuclear power plants such as Tokyo Electric Power Company (TEPCO) are often the target of criticism from the anti-nuclear movement. The government is perceived as prioritizing economic interests over public safety, with a slow and less transparent response to the Fukushima crisis. In addition, the government is considered incapable of properly managing nuclear waste, including the lack of long-term waste storage solutions, adding to public concerns (Takeuchi et al., 2020; Kajikawa, 2016).

However, the position of pro-nuclear groups did not completely weaken, instead it gradually strengthened. The government, especially under Prime Minister Shinzo Abe, continues to support nuclear energy citing its importance for energy security and economic recovery. Proponents of nuclear energy argue that technological advances can reduce risks, while Fukushima should be used as a lesson to improve safety in the future (DeWit, 2013; Kinefuchi, 2022; Patel, 2014). The contestation between pro- and anti-nuclear discourses

continues to this day and even later, reflecting that there is a future for nuclear energy in Japan that is still and remains under debate. Debates about the benefits and risks of nuclear energy will continue to shape Japan's energy policy, while the anti-nuclear movement remains a driving force in policy revisions to achieve a safer and more sustainable society (Koide, 2018; Kumagai & Clammer, 2019; Ohta, 2020).

SPECTRUM OF ENVIRONMENTAL IDEOLOGY IN ANTI-NUCLEAR DISCOURSE IN JAPAN 2011 - 2015

CNIC is one of the non-profit organzation supporting the anti-nuclear movement in Japan that actively produces anti-nuclear discourse. This organization publishes an alternative media called *Hangenpatsu Shinbun* which propagates anti-nuclear discourse through its articles. *Hangenpatsu Shinbun* published 60 editions over five years from 2011 - 2015, where each edition contained 10 to 12 articles, bringing the total number of articles to 600. The results of the interpretation of all articles based on Jula Corbett's theory of environmental ideological spectrum, and grouping of all articles, are as follows:

Table 2. Anti-Nuclear Discourse Topics in Japan (2011-2015) by Environmental Ideology

no	List of Topic (discourse) 2011 - 2015	qty	%	Environmental ideology type
1.	Politics, policy, and nuclear power plants	54	9%	conservatism
2.	Experience of other countries' nuclear power plants	30	5%	conservatism
3.	Children and nuclear power plant (NPP)	24	4%	conservatism
4.	Criticism of TEPCO responsibility	18	3%	conservatism
5.	Fears of being turned into a nuclear bomb	12	2%	conservatism
6.	Nuclear fuel transportation risks	6	1%	conservatism
7.	Terrorist risks to NPP	6	1%	conservatism
8.	Handling the Fukushima NPP Accident and the 2011 East Japan disaster	72	12%	conservatism
9.	Renewable energy	6	1%	conservatism
10.	Nuclear power plant budget criticism	6	1%	conservatism
11.	Nuclear power plant hazards and radiation risks	78	13%	conservatism/ethic
12.	Natural disaster risks to nuclear power plants	12	2%	conservatism/ethic and values-driven ideologies
13.	Nuclear waste treatment/disposal issues	48	8%	conservatism/ethic and values-driven ideologies
14.	Protest, demo, anti-nuclear power plant study	228	38%	preservation
15.	Hiroshima Nagasaki atomic bomb experience	12	2%	preservation
16.	Experience of nuclear power plant accidents in Japan	30	5%	preservation
17.	Demand for nuclear power plant closure	96	16%	preservation
18.	Nuclear casualties (radiation etc.)	24	4%	preservation/ ethic and values-driven ideologies

19.	Experience from Chernobyl	42	7%	preservation/ ethic and values-driven ideologies
20.	Electricity and NPP problems	6	1%	unrestrained instrumentalism
21.	Miscellaneous	12	2%	

Source: Alternative media *Hangenpatsu Shinbun* n: 600 articles

The table illustrates the environmental orientation in the anti-nuclear discourse produced by the *Hangenpatsu Shinbun* media. This discourse tends to reflect conservative, preservationist, ethical value-based, and unfettered instrumentalism views. The conservatism view emphasizes that nature should be protected and managed wisely for sustainability for future generations. This orientation dominated 54% of the discourse. Although the environment is mentioned, its position is often subordinate to human interests. For example, in the topic "children and nuclear power plants", environmental protection is focused more on preventing radioactive exposure for the safety of children, rather than for the environment itself. Similarly, in the topic of "politics, policy, and nuclear power plants", nuclear management is seen as important to protect humans and maintain political and economic stability, while environmental conditions are rarely discussed. This view shows an anthropocentric attitude, where nature is considered important to the extent that it benefits human welfare, both now and in the future.

An example of discourse that has a conservative environmental view is in the article titled 日本の原発をすべて廃炉に一 (Shut down all nuclear power plants in Japan.) published in March 2015 and written by Sasada Takashi. The year 2015 was the year when Japan restarted the operation of its nuclear power plant, Sendai NPP, after a hiatus since 2012. The article was written to commemorate the 30th anniversary of the Chernobyl nuclear power plant accident. The content of the discourse called for the closure of all nuclear power plants in Japan due to the great risk to human safety and the environment. One important statement that reflects the view on the environment is the one below.

> 原発と人類は共存できないということが、チェルノブイリ事故によって現実となった。(Sasada, 2015)
>
> The Chernobyl accident has proven that nuclear power plants and humanity cannot coexist.

The environmental conservatism seen in the above statement reflects the view that humanity cannot coexist with nuclear power plants, as happened in the Chernobyl case. The author emphasizes the impact on humans, without raising environmental factors independently. In fact, the first to be exposed to radiation from the Chernobyl NPP is the environment. Instead, the text also highlights that "those who cannot live with nuclear power plants are all living things, including the environment." This shows that the main concern in the discourse is humans, while the environment is only considered as a secondary element. Environmental elements such as swamps, lakes, and forests polluted by radiation are mentioned, but only in the context of their impact on the residents of Pripyat who live around the Chernobyl NPP. The environment is not considered as an independent entity, but as part of human life, and as a subordinate of human. This pattern reflects that articles with this kind of environmental conservatism often dominate anti-nuclear discourse, especially in the article of *Hangenpatsu shinbun*.

Another example of environmental conservatism in the anti-nuclear discourse can be seen in the statement below.

> 3 ・11 フクシマで明らかに なったように、 失われた命 と汚染された環境は元には 戻らない。 広島・長崎の被 爆者が求めたのは、”憤ってくれ、謝ってくれ “とい う国に対する素朴な思いで あった。 被ばくによる差別 を恐れて被爆者と名乗らな い人たちも多くいた。 被爆者たちは、「精神的 苦痛、 肉体的苦痛、 経済的 苦痛」の三重苦に苛まてれ生涯を送った。 それは、3 3・11 フクシマも同じである。”憤ってくれ、謝ってくれ “と叫び続けなければ ならないのだ。(Yokohara, 2014)
> As the Fukushima disaster on March 11 revealed, the lives lost and the environment polluted will never return to normal. What the victims of the atomic bombings of Hiroshima and Nagasaki want is genuine feelings for the country: “Be angry, and ask for forgiveness.” Many people do not recognize themselves as A-bomb victims for fear of discrimination due to radiation exposure. A-bomb victims live their lives suffering from “mental anguish, physical anguish, and economic anguish” that continue to haunt them throughout their lives. The same thing happened to the victims of Fukushima on March 11. We must continue to voice, “Be angry, and ask for forgiveness.”

The above statement appears in the text of an article entitled “核と人類は共存できない” (Nuclear and Human Can't Coexist), published in December 2014 by Yukio Yokohara of Hiroshima, emphasizing that it is impossible for humans and nuclear to coexist. The article expresses a range of strong emotional feelings, such as sadness and despair over the permanent damage to humans and the environment, as well as anger towards those responsible for the nuclear disaster. Through the tragic experiences of Hiroshima, Nagasaki, and the accident at the Fukushima nuclear power plant on 3/11, the author strongly criticizes the use of nuclear, both as a weapon and for power generation. The author argues that nuclear brings irreparable damage to human life, thus calling for the abolition of nuclear weapons and the shutdown of nuclear power plants. According to him, this is part of the moral demands, human rights, and collective responsibility of the entire society.

However, this article mostly focuses on the human suffering, whether physical, mental or economic. The environmental impact is only briefly discussed, particularly in relation to the damage caused by the Fukushima nuclear power plant accident. The author mentions that “a polluted environment will never return to its original state,” but the main focus is on human suffering. From the perspective of environmental ideology, this article tends to be closer to conservationism, where the environment is considered important because of its benefits to humans, rather than its intrinsic value. There is no deep concern for the protection of ecosystems beyond their impact on humans.

In addition to conservatism, preservationism also occupies a sizable portion, at 38%. Topics such as anti-nuclear protests, the Hiroshima and Nagasaki experiences, and demands for the closure of nuclear power plants reflect the focus of environmental preservationism. Preservationism aims to protect natural resources as they are, as it considers nature to have its own aesthetic value beyond economic use, and potentially future use. Nature is left alone and protected but with the consideration that it could one day be utilized by humans. This view is slightly better than conservatism, but nature is still subordinated to humans. An example of discourse that represents this nuance is in the article entitled ウミガメと川内原発 (Sea Turtles and Sendai Nuclear Power Plant) written by Morinaga Akiko) as follows:

> 鹿児島県には「ウミガメ保護条例」があり、薩摩川　内市でも、ウミガメ監視員による保護監視活動が行なわれています。監視員さん　は産卵を確認すると卵を掘　り上げ、砂浜に作ったふ化　ウミガ　場へ移動させます。しかし、例年 20 頭ほどの　産卵が確認されていた寄田　海岸で、昨年は 3 頭しか産 卵がありませんでした。中 野さんは、「川原内発で行 なわている工事が原因の　ひとつではないか」とおっ　しゃっていました。新規制基準を満たすための工事が始まってから、騒音、振動　に加え、砂浜に黄色い土や 泡のような汚れが見られる ようになったそうです。
> (Morinaga, 2015)
> Kagoshima Prefecture has a "Sea Turtle Protection Ordinance," and in Satsumasendai city, surveillance and protection activities are carried out by sea turtle monitors. However, at Yorita Beach, where around 20 sea turtles usually lay eggs, only 3 turtles laid eggs last year. Mr. Nakano said, "One of the reasons may be the new construction underway at Sendai NPP." Since the construction project to meet the new regulatory standards began, the beach has been experiencing noise, vibration, and dirt such as yellow soil and foam appearing on the sand.

The above statement appears in an article that raises concerns about the negative impact of the new construction of the Sendai Nuclear Power Plant in Kagoshima province on the surrounding environment, particularly on the sea turtle population that nests on the beaches near the plant. The new construction has led to a decrease in the number of sea turtles coming to lay their eggs due to noise, vibration and pollution. In addition, the discourse also highlights the sea turtle protection efforts made by a local watchdog named Yukio Nakano, as well as the struggle of Morinaga and his group to stop the expansion of the power plant. This discourse considers that Sendai NPP has a negative impact on nature, with a critical attitude towards the government and power companies that are considered not caring about the environment.

Turtles have no direct connection to the people of Kagoshima Province. The turtle is nothing more than an ordinary living creature that happens to have a habitat near the Sendai NPP. In fact, they have existed since before the Sendai NPP in Satsumasendai city was established. By the producers of the text above, sea turtles are not seen as a resource that humans can utilize, such as marine fish for consumption, but as creatures that have the right to live and thrive in their ecosystem. This kind of discourse, which leaves the creature or environment as it is and respects it because it has its own value, can be classified into views that lean towards preservationism and ethics and value-driven ideologies. On the one hand, turtles should be allowed to live naturally according to their way of life, and on the other hand, they should still be valued for their existence, regardless of whether they have any contribution or benefit to humans or ecosystems.

Finally, in a small percentage, 1% of anti-nuclear discourse topics were found to reflect the orientation of unrestrained instrumentalism. Unrestrained instrumentalism argues that humans are the most important entity in the world, and natural resources exist solely for human use without restriction. Humans are considered the center of the universe. This perspective emphasizes that decisions regarding the use of resources are based solely on human needs and desires at the time, without taking into account the "position" of the environment or nature. In the topic of "The problem of electricity and nuclear power plants", in the policy debate on whether or not to continue using nuclear energy, the arguments of nuclear proponents often focus only on short-term benefits such as the availability of cheaper and abundant energy, while the risks of radioactive waste, potential nuclear accidents, and potential risks of damaging or

polluting the environment are ignored or minimized. However, anti-nuclear advocates are also similar, tending to ignore environmental or natural factors when rejecting nuclear energy. This can for example be seen in the statement that appears in the article titled 原発ではなく太陽を！(Not the NPP, but the Sun!), written by Ikoma Shikou with the following statement.

> 日本の宝島 ： 天草』に原発はそぐわない。 原発は観光や一次産業、歴史文化はを じめ天草のイメージを損なう。私は原発ではなく太陽 光発電の誘致を積極的に働き掛けたい。
> Japan's jewel island: Amakusa' is not suitable for nuclear power plants. It will damage tourism, primary industries, and Amakusa's historical and cultural image. I prefer to promote the construction of solar power plants rather than nuclear power plants. (Ikoma, 2011)

The above statement is part of an article opposing the construction of a nuclear power plant in Amakusa, Kumamoto Prefecture. Since 1967, plans to build a nuclear power plant have been raised several times, but have always been rejected by the local community due to concerns about negative impacts on the environment, tourism, and local culture. This opposition was supported by the Mayor of Amakusa, Yasuda Kimihiro, who favored solar energy over nuclear power. The local community also formed a group called “Not NPP, but Sun!” which actively campaigned against nuclear power plants through various activities and seminars. Despite widespread opposition, Kyushu Electric Power continues to support nuclear power plants, leading to distrust from the public.

Through the above statement, this discourse articulates the rejection of the plan to build a nuclear power plant on the grounds of damaging tourism, primary industry, historical image, and Amakusa culture. Unfortunately, when searched throughout the content of the discourse, there is no mention of the environment, nature, or non-human beings at all. This can be considered that nature, the environment, or non-human beings are not important. When building a nuclear power plant, what must be done is clearing forests and land. Channels to and from the sea must also be made to drain sea water as a coolant. If there is a radiation leak, the air, land and water will be at risk. Discourse construction like this proves that the anti-nuclear discourse is sometimes trapped in an orientation that is too anthropocentric and instrumentalist. Fortunately, this discourse is not dominant compared to the overall anti-nuclear discourse produced by *Hangenpatsu Shinbun*.

ANTHROPOCENTRIC VS. ECOCENTRIC IN NUCLEAR ENERGY CRITIQUE

In the critique of nuclear energy in Japan, the debate between anthropocentric and ecocentric reflects the environmental orientation reflected in anti-nuclear discourse. The discourse produced by media such as the *Hangenpatsu Shinbun* from 2011 to 2015 tended to be dominated by conservationist and preservationist perspectives. Although the main purpose of this critique is to denounce the use of nuclear energy as harmful to life, ironically the focus on nature and the environment is often placed in a subordinate position to human interests.

The words “human” or “child” appear far more frequently in this discourse than “nature,” “environment,” or “flora” and “fauna.” The relationship between humans and nature is rarely constructed equally, as if the risks faced by humans are considered more urgent than the damage to the environment. This indicates that the environmental orientation adopted is still very anthropocentric, where humans are placed at the center of attention, and everything around them is considered important only to the extent that it affects humans.

One reason behind this dominance of anthropocentric is that the risks of nuclear energy feel more real and immediate to humans. Nuclear radiation directly affects human health in a short period of time, so concerns about long-term environmental damage seem less urgent. This creates the impression that as long as humans are not exposed to nuclear radiation, negative impacts on the environment can be tolerated or even ignored. Such a perspective poses an ethical dilemma because the environment is not valued for its intrinsic value, but only as a tool to ensure human safety.

The conservationist approach, which tends to be more moderate, has wider appeal in public discourse. Conservationism emphasizes the importance of protecting the environment for the direct benefits it provides to humans, making it more politically palatable and more practical to implement in public policy. Meanwhile, more radical environmental ideologies such as deep ecology or ecocentric, which demand the protection of the ecosystem as a whole without putting humans at the center, are often considered too difficult to implement both economically and politically. As a result, anti-nuclear discourses with this anthropocentric view gain wider support because they are more focused on mitigating direct risks to humans.

However, the dominance of anthropocentric in this anti-nuclear discourse has serious implications. If only the impact on humans is prioritized, then the issue of long-term ecosystem sustainability is potentially neglected. By knowing how the anti-nuclear movement concerns itself with nature or non-human beings, it can be seen that the anti-nuclear struggle is not only about human safety, but also about the moral responsibility of protecting all life forms and ecosystems. This helps to create harmony with nature in energy policy making. On the other hand, ecocentric, which emphasizes equality between humans and all entities in nature, can provide a more comprehensive solution to maintain environmental balance. However, if the anti-nuclear discourse continues to override the ecocentric view, nature will continue to be seen as a resource that can be exploited as long as it does not directly harm humans. This opens space for the justification of actions such as deforestation, pollution, and other environmental damage that are allowed to occur as long as the impact is not felt in people's daily lives.

In other words, criticism of nuclear energy in Japan, although driven by environmental concerns, is still very much oriented towards human safety. If this discourse fails to transition towards a more ecocentric view, then threats to environmental sustainability in the long run will continue to increase. It is in this context that criticism of nuclear energy must be deepened by considering that ecosystems also have values that must be protected, not solely for the sake of human interests, but for the sustainability of life on the planet as a whole.

CONCLUSIONS

The environmental orientation or ideology in the anti-nuclear discourse produced by the alternative media *Hangenpatsu shinbun* between 2011 and 2015, shows a still strong tendency towards anthropocentricity. The anti-nuclear discourse focuses more on the impact of nuclear energy on humans rather than the environment intrinsically. Although produced by anti-nuclear groups that are also pro-environment, many articles still place human interests at the center, with nature and non-human beings in a subordinate position.

Through the alternative media *Hangenpatsu shinbun* it can be hypothesized that much of the anti-nuclear discourse in Japan reflects a conservationist ideology, where nature is considered important insofar as it provides benefits to human well-being, both now and in the future. Preservationist views, which value nature for its aesthetic value and potential future use, also appear in the second largest number after conservationists, but remain within the framework of subordination to human needs.

This tendency towards anthropocentrism is largely due to the perception that the risks of nuclear radiation to humans are more pressing than long-term environmental damage, which

may not be immediately apparent. Conservationism, with its more moderate and practical approach, tends to be more easily accepted in public policy, thus gaining wider support. While more radical environmental ideologies, such as ecocentrism or deep ecology, which emphasize equality between humans and all natural entities, are often considered too difficult to implement politically and economically.

However, the anthropocentric approach certainly has its downsides, especially when it comes to the long-term sustainability of ecosystems. By prioritizing humans, impacts on the environment risk being overlooked or underestimated, thus justifying the exposure of nature to nuclear radiation. On the other hand, the risks to environmental sustainability will be greater, and long-term ecological impacts will be less considered.

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