The Legacy of Antinuclear Movements in the Inter-Disaster Period: A Comparative Analysis of Japan and Taiwan

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Outline

1. Introduction
2. An Overview of the history of Taiwanese antinuclear movements
3. Three aspects of legacy for policy change
4. An Overview of the history of Japanese antinuclear movements
5. Backgrounds of failure for policy change
6. Conclusion: Continuities and discontinuities in the post-Fukushima disaster period

1. Introduction

This paper compares the antinuclear movements in Japan and Taiwan. Both countries share political and social environments in which these movements have emerged. First, Japan and Taiwan, often referred to as “developmental states”, prioritized economic development as their highest goal, implementing necessary policy measures to achieve it. Second, during the Cold War, both nations, in competition with neighboring communist countries, promoted the development and commercial use of nuclear power to strengthen their economies. Third, decisions regarding nuclear policy were highly centralized within a small circle of bureaucrats and business leaders. Finally, both countries witnessed a rise in antinuclear movements during the 2010s.

However, the outcomes of these movements have diverged significantly between the two countries. Taiwan's antinuclear movements successfully influenced nuclear policy, leading to the phasing out of nuclear power generation by 2025 and a reduction in the country's reliance on nuclear energy. In contrast, Japan's antinuclear movements have been less effective, as the government continues to advocate for the reactivation and extension of nuclear reactors' operational lifespans. Why did these differences emerge? This question has intrigued many experts on both countries as well as scholars of social movements.

Ming-sho Ho points out that while the "Chernobyl effect"—the rise of antinuclear movements triggered by the disaster—spread widely across East Asia, the "Fukushima effect" was limited to only a few countries in the region (Ho 2014: 967). As will be discussed later, the Fukushima effect was temporary, even within Japan. This raises the question of why Japan's antinuclear movements failed to bring about a significant policy change, despite the large number of people affected by the disaster. To address this puzzle, I will compare the antinuclear movements in Japan and Taiwan.

A wide range of scholars on Japan began examining the power of what is now called the post-3.11 antinuclear movements, with "3.11" signifying the date of the Fukushima disaster: March 11, 2011. Researchers have rigorously explored various aspects of these movements, particularly the social context that sparked the massive surge in public participation. However, they have largely neglected the historical context of these movements. With a few exceptions (e.g., Hasegawa 2004), most scholars have focused primarily on the "post-3.11" period, leading to an overemphasis on the novelty of the movements that emerged after the disaster. This focus has obscured the historical continuity of antinuclear activism. Investigating the connections between pre- and post-3.11 antinuclear activism remains a crucial yet largely unaddressed academic challenge.

In light of the existing literature, this paper focuses on the period between two major nuclear accidents—the Chernobyl nuclear disaster in April 1986 and the Fukushima Daiichi nuclear disaster in March 2011. I refer to this as the "inter-disaster period." The Chernobyl disaster released radioactive materials worldwide, affecting both Japan and Taiwan. This event sparked widespread public concern about the safety of nuclear power and led to increased participation in antinuclear movements. While these movements did not succeed in changing nuclear policy during this time, they left a legacy that influenced antinuclear activism after 2011. What was the legacy of the post-Chernobyl movements, and how did it shape the outcomes of later antinuclear efforts? These are the questions I aim to explore.

The paper begins by providing an overview of the history of Taiwanese antinuclear movements during the inter-disaster period. Drawing on existing literature, I classify the legacy of these movements into three key aspects: the formation of alliances with opposition parties, the development of a shared understanding of nuclear policy as a national issue, and the "cultural turn" in movement strategies. Second, the paper examines the history of Japanese antinuclear movements during the same period, analyzing the three aspects of legacy identified in the Taiwanese case within the Japanese context. Finally, the paper concludes by discussing how this legacy has shaped the outcomes of Japanese antinuclear movements in the post-Fukushima period.

2. An Overview of the history of Taiwanese antinuclear movements

In Taiwan, nuclear power was initiated and financed by the government, with decision-making processes being highly centralized. Taipower, a state-owned company controlled by the central government, owns two-thirds of Taiwan’s power stations and is responsible for the use of nuclear power. In 1955, Taipower established the Atomic Power Research Committee to gather information on nuclear energy and sent experts abroad to study it (Lee 2011: 168). This marked the beginning of nuclear power development in Taiwan. During the initial phase, National Tsing Hua University, which was reestablished in 1955, played a key role in advancing nuclear science by focusing on nuclear science and engineering and training future experts. In the 1970s, the first, second, and third nuclear

power plants were constructed and began operations. The fourth plant, proposed in 1980, faced repeated delays and operational setbacks due to ongoing issues (Lee 2011: 169).

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This section outlines the history of Taiwanese antinuclear movements prior to the Fukushima disaster. Following Ming-sho Ho's analysis (Ho 2003; Ho 2010), I have divided this history into five periods. The first is the period of "The Nuclear Energy Debate (1979-1986)," marking the early stage of antinuclear movements. During this time, academic scholars led the movement, leveraging their professional knowledge to critique nuclear policy. In particular, following the Three Mile Island incident in 1979, these scholars began to question the state's promotion of nuclear energy (Ho 2003: 688-89).

In addition, the *tangwai*—nonpartisan political activists—also challenged the central government's nuclear policy, seeking to build alliances with other opponents of the ruling KMT. They published antinuclear articles in their magazines and stirred public opposition to nuclear power (Ho 2003: 690). Ho emphasizes that, in the mid-1980s, the nuclear issue had not yet become a partisan matter. Some young KMT politicians were even sympathetic to the antinuclear cause (Ho 2003: 691). At this stage, the nuclear debate transcended political ideologies.

The central issue during this period was the debate over the pros and cons of constructing the fourth nuclear power plant. Antinuclear activists expressed concerns about the safety of nuclear energy, particularly in light of several minor nuclear accidents. They were also critical of the government's lack of financial oversight regarding the third nuclear power plant (Ho 2003: 691).

The second period is characterized by the "Rise of Grassroots Protest and the DPP's Involvement (1987-1989)." Prior to the lifting of martial law in 1987, a significant wave of grassroots protests against industrial pollution emerged throughout Taiwan. In response, the Taiwan Environmental Protection Union (TEPU) was established in 1987. While grassroots victims played a central role in these environmental movements, intellectuals supported their efforts. Although antinuclear discussions were more specialized than those related to pollution, the movements gained broader public attention during this period. In October 1986, academics and young *tangwai* activists organized the first protest at the Tai-power Company headquarters in Taipei. A public speech against the construction of a nuclear power plant in Gongliao significantly impacted local fisheries (Ho 2003: 692-93).

During this period, the DPP advocated against the construction of new nuclear plants and called for stricter oversight of existing ones, as outlined in its original party charter of 1986. The DPP's stance against nuclear power helped reorganize the *tangwai* into a formal party structure. This alliance enabled the antinuclear movement to reach a broader audience (Ho 2003: 693-94). However, it also increased the movement's dependence on the DPP.

The third period is characterized by “The Making of Party Dependence (1990-1995).” During this time, antinuclear movements increasingly aligned with their support for the DPP, leading to a decline in antinuclear voices within the KMT (Ho 2003: 696). This period marked the establishment of a structural ideological conflict between the pro-nuclear KMT and the anti-nuclear DPP.

However, antinuclear activists had to contend with the realities of party politics. With KMT members holding the majority in the Legislative Yuan, it became extremely difficult to persuade non-DPP politicians to support antinuclear causes (Ho 2003: 700-01). As a result, antinuclear movements increasingly relied on resources from the DPP. Consequently, the outcomes of these movements were influenced by the ongoing contests between the two parties.

The fourth is the period of “the effort to re-assert movement autonomy (1996-2000)”. Close relations between the DPP and antinuclear movements began to change in this period. In the middle of discussions about the bill to abolish all nuclear plants under construction in 1996, it was revealed that the DPP parliamentary leadership had tacitly traded the bill for other concessions from the KMT. This incited the mixed feelings of betrayal and fury among antinuclear activists (Ho 2003: 702). This was the beginning of growing skeptics of the DPP’s legislators among antinuclear movements.

The fourth period is characterized by “The Effort to Reassert Movement Autonomy (1996-2000).” During this time, the close relationship between the DPP and antinuclear movements began to change. In the midst of discussions about a bill to abolish all nuclear plants under construction in 1996, it was revealed that the DPP parliamentary leadership had tacitly exchanged support for the bill in return for other concessions from the KMT. This revelation sparked feelings of betrayal and anger among antinuclear activists (Ho 2003: 702). This marked the beginning of growing skepticism toward the DPP among antinuclear movements.

The fifth period is characterized by “Incorporation” (2000-2008). In the 2000 presidential election, Chen Shui-bian of the DPP emerged victorious. During his campaign, many scholars and activists were recruited to develop policy proposals to be implemented once the DPP took office. Although some social movement organizations were included in the decision-making process during the Chen administration, they largely struggled to achieve structural changes (Ho 2010: 13).

Antinuclear activists were unable to abolish all nuclear plants under construction, including the fourth plant. The DPP's eight-year term became a period of disenchantment for those once-optimistic activists. This disillusionment paved the way for the period of “Resurgence” (2008-2010), during which antinuclear activists began to rebuild their movements following Ma Ying-jeou's victory in the presidential election in March 2008 and the DPP's withdrawal from power.

3. Three aspects of legacy for policy change

The backgrounds of policy change

As mentioned in the introduction, Taiwanese antinuclear movements successfully moved away from dependence on nuclear power. In January 2017, the Legislative Yuan passed amendments to the Electricity Act, mandating the closure of all nuclear plants across the country by 2025. The Taiwan government aimed to transition its energy policy and achieve a "Nuclear-Free Homeland." To explain why this transition was successful, it is essential to examine the political negotiations between leaders and movements. Here, I focus on exploring the background of the movement legacy that contributed to this successful transition. What were the legacies of the antinuclear movements during the inter-disaster period that facilitated later policy changes? Based on the outline of movements discussed in the previous section, I identify three aspects of this legacy.

First, antinuclear movements established alliances with political parties, particularly forming a close relationship with the opposition party, the DPP. This relationship emerged from the history of democratization movements in Taiwan. Shortly after its founding, the DPP explicitly stated in its charter its opposition to the KMT's promotion of nuclear power (Ho 2003: 694).

Why did the DPP adopt an antinuclear stance during this period? One reason is the overlap between the DPP's political leaders and antinuclear activists. Early antinuclear intellectuals, such as Edgar Lin and Chang Kuo-lung from Tsing Hua University, maintained close ties with some opposition leaders. Both eventually joined the DPP and became active in politics (Ho 2003: 694).

Another reason for the DPP's antinuclear stance during this period was their political strategies. DPP leaders were pragmatic, adopting an antinuclear position to gain an advantage over the KMT in elections. However, the DPP's support for antinuclear movements was not solely based on strategic considerations. Ho argues that the party's stance was rooted in a broader vision, asserting that "the aims of political democratization and social reforms were taken equally" (Ho 2003: 695). This indicates that DPP leaders viewed these goals as two sides of the same coin.

It is true that the relationship between the DPP and antinuclear movements was not always harmonious. During Chen Shui-bian's presidency, many antinuclear activists grew frustrated with the DPP's reluctance to shut down nuclear plants, expressing feelings of betrayal by the party. When Ma Ying-jeou from the KMT became president in 2008, civic organizations—such as environmental groups, social worker groups, and labor unions—recognized the need to reconstruct their relationships with political parties (Xiao and Gu 2010: 3). Nevertheless, while the movements distanced themselves from the KMT, which maintained a pronuclear stance, they kept loose ties with the DPP (Xiao and Gu 2010: 10).

Tan Uichi highlights the complementary roles of the Green Citizens' Action Alliance (GCAA, an environmental NGO, which will be discussed later) and the Taiwan Environmental Protection Union (TEPU) in building their support base. He noted that while the GCAA garnered support from non-party-affiliated citizens, the TEPU continued to receive backing from DPP supporters (Tan

2024 :185). This loose alliance allowed them to expand their base without alienating traditional supporters. Consequently, the historical relationship between antinuclear movements and the opposition party served as a political resource, helping to bring nuclear policy to the forefront of the political agenda and facilitate policy change when the political opportunity structure shifted.

Second, nuclear policy evolved into a nationwide issue. Initially, the nuclear power debate was primarily a local concern, often discussed only by those living near (planned) nuclear reactor sites, while others, particularly urban residents, showed little interest in the matter. However, it became a national issue during the DPP's time in office. Although antinuclear activists expressed frustration with the DPP's reluctance to abolish nuclear power, it is important to note that the party made several concessions to the KMT-dominated Legislative Yuan, thereby opening up opportunities for future policy changes.

In 2002, the Chen Shui-bian administration enacted the Basic Environment Act, which included a clause for a "nuclear-free homeland." However, the phrase "nuclear-free homeland" remained somewhat ambiguous, as the timeline for achieving this goal was not specified, leaving it up to the administration's discretion (Lai 2022: 299; Suzuki 2020: 55). Despite this, the enactment of the Basic Environment Act was pivotal in creating a national consensus to reduce reliance on nuclear power. It also enabled the DPP to claim that they had secured from the KMT the endorsement of a "nuclear-free homeland as the eventual goal" (Ho 2014: 973). Furthermore, the DPP established a cabinet-level Nuclear-Free Homeland Communication Committee, inviting NGO leaders to participate. This collaboration allowed activists to build a trusting relationship with officials from the Environmental Protection Administration (Ho 2014: 973; Ho 2005: 408).

It is also important to note that the Referendum Act played a significant role in making nuclear policy a nationwide issue. Enacted in 2003 during the Chen Shui-bian administration, the Act allows citizens to propose referendums on policies and laws at both the national and local levels (Lai 2022: 305). Prior to this, antinuclear activists had initiated local-level referendums to approve or oppose the construction of the fourth nuclear plant (Wang and Tsui 2023: 144). After 2003, the use of referendums by antinuclear activists gained legal and political legitimacy, providing a formal avenue for public participation in nuclear policy decisions.

A referendum provides a direct way for citizens to express their opinions on specific issues to political leaders. As more people grow skeptical of the effectiveness of parliamentary democracy—frustrated by the limited choice of merely selecting representatives from pre-determined lists—referendums offer a means for greater public involvement in political decision-making. In this sense, referendums serve to "democratize democracy" by increasing the level of citizen participation and engagement in shaping policy.

The Referendum Act was a product of democratization movements, but it was only after the Fukushima disaster that antinuclear activists successfully leveraged the Act. However, the

Referendum Act does not always work in favor of antinuclear movements. In 2017, the Legislative Yuan revised the Act to lower the threshold for holding referendums. This led to a backlash from the pronuclear camp, which advocated for increased nuclear power use to stabilize electricity supply and reduce greenhouse gas emissions. Nevertheless, referendums have been effective in preventing nuclear policy from being confined to a local issue, elevating it to a national discussion. In the 1970s and 1980s, the nuclear issue was seen as the "monopoly of expert scientists" (Wang and Tsui 2023: 349). The Referendum Act disrupted this monopoly, opening the debate to public participation.

Third, antinuclear movements became more independent from the DPP. As mentioned earlier, antinuclear activists were frustrated with the DPP's reluctance to halt the construction of the fourth nuclear power plant and implement substantial changes to nuclear policy during the Chen Shui-bian administration. One reason for the DPP's decision to resume construction was economic. The government was concerned that pursuing social reforms, including the abolition of nuclear power, could negatively impact Taiwan's economy, which had fallen into recession in the early 2000s (Ho 2005: 413). Political factors also played a crucial role in what activists saw as the DPP's "betrayal." The balance of power in the Legislative Yuan, where the KMT held the majority, disadvantaged the Chen Shui-bian administration (何 2006: 282).

Ming-sho Ho pointed out the DPP's lack of commitment to changing nuclear policy, emphasizing that the party's stance on nuclear power remained unclear (Ho 2006: 283-84). This ambiguity meant the DPP did not clearly articulate how its antinuclear position aligned with its broader party platform. As a result, antinuclear movements saw a decline in both their organizational capacity and public influence.

This decline particularly affected local protesters in Gongliao, who opposed the construction of the fourth nuclear power plant. Some critics viewed these protests as a typical "not in my backyard" (NIMBY) movement, prioritizing local concerns over national interests. Others suspected that the local opposition was motivated primarily by a desire to secure government subsidies (Wei 2016: 9).

When antinuclear activists rebuilt their movements following the DPP's "betrayal," they reconsidered their reliance on the party for resources. While the DPP provided valuable political support, activists began to recognize the drawbacks of becoming too closely aligned with political parties. Yousun Chung highlighted that social movements can become overly dependent on the fortunes of political parties. If a party loses an election, a movement linked to it may also falter. Chung further emphasized that the goals of political parties and social movements can diverge. Parties may prioritize their own political agendas, often at the expense of the movement's objectives (Chung 2020: 4). In such situations, the goals of the movement can become secondary and receive less attention. Activists may find themselves forced to compromise or suspend their original goals in order to maintain their relationship with the party.

In sum, there are significant differences in resources, political influence, and media visibility between political parties and social movements. Activists are always at risk of becoming subordinate to political parties when they form alliances. Taiwan's antinuclear activists became keenly aware of this after their disillusionment with the DPP during the Chen Shui-bian administration, leading them to pursue greater independence from the party. Existing literature suggests that this effort was successful. Social movement groups, rather than the DPP, played a central role in organizing these demonstrations. In the post-3.11 period, the DPP no longer held overwhelming influence over the antinuclear movement.

What contributed to the growing independence of Taiwan's antinuclear movements from the DPP? One significant factor was the development of broader democratization movements, which was external to the antinuclear movements themselves. The influence of the Sunflower Movement, which emerged in 2014 in response to a dispute over a free-trade agreement, was particularly crucial. Activists in the Sunflower Movement raised three key concerns: protecting Taiwan from China's influence, the potential negative impacts of free trade on small businesses, and the lack of transparency in the agreement's decision-making process (Linand Wu 2016: 132). Ming-sho Ho observed that the Sunflower Movement had an unexpected impact on nuclear politics (Ho 2018: 14). It not only increased public tolerance for disruptive civil disobedience but also heightened awareness of the important role that social movements play in a democratic society.

The other factor is the "cultural turn" in movement strategies adopted by antinuclear activists. Before the "betrayal," Taiwan's antinuclear movements were highly political. A notable example is Edgar Lin Chun-yi, who studied in the USA during the 1960s, a time when protests against the Vietnam War were widespread. After returning to Taiwan, he emerged as a leader in the nascent environmental movements. Lin asserted that ecological movements should be inherently political and that political movements should incorporate ecological concerns (Wang and Tsui 2023: 64). Following this principle, he established close relationships with political leaders in the opposition party, eventually running for election with the DPP and being elected as a member of the Legislative Yuan.

In the process of reconstructing the movements in the 2000s, antinuclear activists shifted their strategies to include various cultural events. The Green Citizens' Action Alliance (GCAA) played a key role in revitalizing these movements. Originally established as the Taipei branch of the Taiwan Environmental Protection Union, the GCAA split from it in 2000 due to differing views on the relationship with the DPP. The GCAA represented a younger generation of environmentalists who were increasingly intolerant of the DPP's deviations from its environmental commitments (Wei 2016: 11).

The GCAA organized hundreds of screenings of *How Are You, Gongliao?*, a film released in 2004 by Tsui Susin, one of the GCAA's leaders. The film focused on the perspectives of Gongliao

villagers, portraying them as victims desperately striving to protect their homeland from a brutally imposed state policy. These screening events encouraged viewers to reconsider the image of local people as a “violent mob” (Wei 2016: 12; Wang and Tsui 2023: 379).

These events prompted visits from young people, including university students, to Gongliao. Such visits helped them become more aware of nuclear issues and fostered a sense of sympathy for the villagers. Shuge Wei emphasized that the GCAA played a crucial role in depoliticizing local identity and cultivating a place-based consciousness among the Gongliao villagers (Wei 2016: 12). As a result, the villagers grew proud of their local identity and recognized that their lives should not be victimized by decisions made by urban residents.

The GCAA members successfully expanded their support base to include young people who enjoyed popular culture, exemplified by their collaboration with the Hohaiyan Rock Festival in Gongliao. This festival, which began in 2000, became the largest music festival in Taiwan, organized annually by independent music groups and the Taipei County government. The rock festival took place on the beach behind the construction sites of the fourth nuclear plant. After investigating the construction's effects, GCAA members voiced their concerns about the shrinking beach, sea pollution, and the potential nuclear hazards posed by the construction. The music bands and festival-goers who came to Gongliao shared these concerns, adopting the slogan “Protect Beach and No Nukes.” This collaboration ultimately influenced public perceptions of the negative impacts associated with the fourth nuclear plant (Wei 2016: 12).

As the Hohaiyan Rock Festival became increasingly influenced by large corporations, the GCAA took the initiative to organize the annual "No Nukes" antinuclear concert on the local beach starting in 2009 (Wei 2016: 12). By building alliances with rock bands and their fans, the GCAA effectively engaged a broader audience in antinuclear actions (Ho 2014: 975). This "cultural turn" in movement strategies during the reconstruction period made their causes more widely accessible and relatable to the public.

4. An Overview of the history of Japanese antinuclear movements

Drawing on my book (Ando 2019), This section moves to discussing Japanese antinuclear movements. Decision makings on nuclear policy have been centralized in Japan as well as in Taiwan. Existing literatures stressed that the decision-making process has been dominated by the “Nuclear Village (*genshiryoku mura*)”. It is used to refer to “the institutional and individual pro-nuclear advocates who comprise the utilities, nuclear vendors, bureaucracy, Diet (Japan’s parliament), financial sector, media and academia” (Kingston 2012). Kingston stated that the “Nuclear Village” had “considerable overlap with the so-called ‘Iron Triangle’”, which was composed of big companies, bureaucracy and the Liberal Democratic Party (Kingston 2012).

How did the “Nuclear Village” dominate the decision-making process? Yoshioka Hitoshi presented a framework to analyze it, which he referred to as the “dual sub-governmental model” (Yoshioka 2011). According to him, the elites involved in Japan’s nuclear policy could be classified into two main groups. The first group consisted of the alliance between the Ministry of International Trade and Industry (MITI), power companies, and manufacturing companies. This alliance was responsible for the commercial management of nuclear power. MITI, along with electric utilities and major manufacturers such as Toshiba and Hitachi, worked together to promote and expand nuclear energy, considering it essential for Japan’s economic growth and energy security.

The second group in Yoshioka Hitoshi's "dual sub-governmental model" was composed of the Science and Technology Agency, its affiliated research institutes, and scientists. This group was responsible for the research and development phase of nuclear power. Scientists played a crucial role within this group, with their expertise forming the basis for their legitimacy in managing nuclear power and influencing policy.

Although the two groups—MITI and the Science and Technology Agency—occasionally clashed over specific issues, they ultimately coexisted and aligned in their support for nuclear power, as both stood to benefit from the pronuclear agenda. Together, they bolstered the "Nuclear Village," a system that systematically sidelined dissenting voices.

Scientist-activist Takagi Jinzaburo criticized the "Nuclear Village" for fostering an environment that allowed "no discussions, no internal criticism, and no philosophy" (Takagi 2000). The core belief within the "Nuclear Village" was that promoting nuclear energy would drive both Japan’s economic growth and their own personal and institutional success. This approach was deeply rooted in developmentalist ideology, which saw the state's primary goal as achieving national prosperity through policies that encouraged economic development, including the aggressive expansion of nuclear power.

The Japanese state introduced nuclear power for energy use in the 1950s. Initially, the general public was wary and cautious of nuclear power, as the devastating effects of the atomic bombs dropped on Hiroshima and Nagasaki in 1945 were still fresh in their collective memory. To overcome this challenge, proponents of nuclear power coined the term "peaceful use of nuclear energy." This phrase allowed them to create a distinction between nuclear power generation and nuclear weapons, helping to alleviate public fears. Through this narrative, they promoted the idea that nuclear energy would lead to a prosperous and comfortable life, surrounded by modern electronic conveniences.

History

(1) The rise of women’s antinuclear actions (1986-1988)

The Chernobyl Nuclear Disaster spurred antinuclear activism not only in European countries but also in Japan. A notable development during this period was the increased participation of women in antinuclear protests. Prior to Chernobyl, most antinuclear protesters in Japan were residents of rural

areas near nuclear reactors, predominantly fishers and farmers. While some labor unions lent their support, the involvement of urban residents was limited.

After the Chernobyl disaster, however, a growing number of city dwellers, especially women, began to join the movement. This marked a significant shift as the protest base expanded to include urban populations and women. Many of these women were skeptical of the government's assurances of safety, especially given its reluctance to investigate radioactive contamination. Housewives, often in their 30s and 40s with young children, became particularly active. They were deeply concerned about food safety, as they routinely prepared meals and became involved in pushing local food cooperatives, such as Seikatsu Club Coop, to measure radioactive contamination in food products. This wave of women's activism helped bring heightened attention to the issue of food safety and nuclear risks in Japan.

Women activists were deeply skeptical of nuclear experts who were financially tied to the nuclear industry and strongly promoted the safety myth of nuclear power. These experts were seen as part of the "Nuclear Village," a closed network that supported the continued expansion of nuclear energy. In response, the women activists took matters into their own hands, measuring radiation levels in food themselves. While they were not trained scientists, they believed in their ability to uncover the truth about contamination, driven by a commitment to protecting their families and communities.

The movement was bolstered by the involvement of "antinuclear intellectuals," experts who aligned with activists and promoted the idea of "citizen science." One prominent figure was Takagi Jinzaburo, the head of the Citizens' Nuclear Information Center (CNIC). Originally a nuclear engineering professor, Takagi became disillusioned with the role of universities and science in supporting harmful industries, particularly during the Vietnam War and environmental pollution crises. In 1975, he left academia to establish CNIC, where he worked closely with women activists to challenge the narratives pushed by the nuclear industry. Takagi's advocacy for citizen-led scientific inquiry empowered the movement, highlighting the critical role of regular people in questioning and resisting the dominance of nuclear power.

The mobilization of antinuclear actions, including rallies and demonstrations, reached its peak in the first half of 1988. This surge was fueled by grassroots community efforts to measure radiation in food, which not only raised awareness but also built a strong foundation for collective action. The collaboration between women activists and antinuclear scientists played a crucial role during this time, as their partnership combined community activism with scientific expertise.

(2) Failure to change nuclear policy (1989-1992)

Women's actions had a significant impact on media discourses surrounding nuclear power. Notably, this shift did not originate from mainstream outlets such as newspapers and television stations, but rather from tabloid papers, which typically held a marginalized position in the news industry. These

non-mainstream media sources effectively invoked public anxiety about the safety of nuclear plants, resonating particularly well with urban residents. As a result, many city dwellers came to realize that they were directly affected by the Chernobyl nuclear disaster, especially through the consumption of contaminated food. The crisis transformed from a distant narrative into a pressing, immediate concern that was part of their daily lives.

Capitalizing on this growing awareness, certain antinuclear activists became dedicated to pursuing changes in nuclear policy. However, they faced two significant challenges during this period. The first was posed by newly formed antinuclear parties that aimed to influence policy from within the political system. These parties contested the Upper House elections in July 1989, but encountered substantial obstacles. High electoral thresholds within the system made it difficult for them to secure a significant number of votes. Moreover, their inability to forge a broader alliance among various activist groups further hampered their efforts, limiting their capacity to gain traction and mobilize a larger electorate.

The second challenge was a national campaign aimed at enacting a Nuclear Free Law. This campaign was proposed and launched in April 1988, during a period of rising mobilization in the streets. Antinuclear activists dedicated themselves to gathering signatures nationwide, ultimately collecting over 2 million signatures to petition the Diet for the enactment of the law. However, despite this significant grassroots effort, the campaign faced critical setbacks.

A major factor in its failure was the lack of effective strategies to garner broad support among Diet members. As a result, the petition was never discussed in either the Upper or Lower House. This failure was a substantial blow to antinuclear activists, as it led to a loss of faith in their ability to influence political institutions and enact meaningful changes to nuclear policy. Without a clear path forward, many activists found themselves disillusioned, struggling to maintain their momentum and vision for a nuclear-free future.

Antinuclear activists increasingly resorted to more confrontational direct actions on the streets as a response to the formidable influence of the Nuclear Village over political decision-making in the Diet, government, and judiciary. Recognizing the challenges of effecting change through conventional methods, activists shifted their strategies to adopt more unconventional approaches aimed at directly impacting the decision-making processes surrounding nuclear policy.

Between 1986 and 1988, these activists organized various direct actions across the country, demonstrating their commitment to challenging the status quo. A notable example occurred in September 1991 when women activists occupied a space in front of the nuclear fuel reprocessing plant in Rokkasho village. However, this form of protests faced significant backlash from mainstream media, which was largely hostile to confrontational direct actions. Instead of portraying these activists as concerned citizens fighting for a just cause, the media often depicted them as selfish and violent "extremists." This negative portrayal contributed to the marginalization of direct actions, rendering them largely invisible to the broader public and undermining their potential impact on public discourse

and policy change.

(3) Local protests and repeated accidents (1993-1999)

In the 1990s, while the overall mobilization of antinuclear protesters in Japan experienced a decline, the movements increasingly became localized. Notably, several proposals for new nuclear plants, including those at Hikigawa, Hidaka, and Kubokawa, faced strong opposition from local communities, which ultimately led to their failure.

One of the most significant successes for antinuclear activists during this period occurred in Maki, Niigata Prefecture. Faced with plans to construct a nuclear plant in their town, local residents organized grassroots campaigns advocating for a referendum on the issue. This referendum, held in August 1996, resulted in a clear majority of residents rejecting the nuclear plant proposal. The outcome empowered the mayor to withdraw the plan, demonstrating the effectiveness of localized activism in shaping energy policy.

In addition to local efforts, Japanese antinuclear activists sought to build alliances with activists from other Asian countries, particularly in response to the Japanese government and power companies promoting the export of nuclear reactors to rapidly developing nations such as Taiwan and South Korea. Drawing from their own experiences, these activists provided support to local protesters in those countries, fostering a broader regional movement against nuclear energy.

Since 1993, these collaborative efforts culminated in the establishment of the No Nukes Asia Forum, an annual international meeting that brings together activists from various nations to exchange information and knowledge regarding nuclear issues in the region. This forum has facilitated a deeper understanding of the challenges faced by communities fighting against nuclear energy, while also reinforcing solidarity among activists across national boundaries. Through these localized protests and international collaborations, antinuclear movements in Japan were able to adapt and respond to shifting political landscapes while continuing to advocate for safer energy alternatives.

On the other hand, accidents of domestic nuclear facilities did not stop in this period. In December 1995, a sodium leakage accident occurred in fast-breeder nuclear reactor Monju in Tsuruga, Fukui Prefecture. In September 1999, two workers were victimized by an accident occurred at the nuclear fuel reprocessing plant in Tokaimura, Ibaraki Prefecture. These critical accidents had increased public fear and distrust of nuclear power to an unprecedented level. The government and power companies faced a mounting difficulty in constructing new reactors.

(4) The reconstruction of the “Nuclear Village” (2000-2010)

It is in this period that while antinuclear movements decreased their influence on the public, the Nuclear Village reconstructed their dominance in decision makings of nuclear policy.

There were growing conflicts within the Village. In this period, power companies were not satisfied

with the central government's nuclear policy. They were required to increase spending for large-scale projects such as fast-breeding reactors and nuclear fuel reprocessing (Yoshioka 2011: 243-44). These companies, with several bureaucrats, had expected the liberalization of electronic markets, which had been discussed among policy makers in this period, to increase their discretion of business. But after the discussion, the scope of liberalization was decided narrowly to the entry of major consumers into retail sales (Kamikawa 2018: 134-38).

The government responded to the internal conflicts within the Nuclear Village by tightening its control and reaffirming its commitment to nuclear energy. This was exemplified by the enactment of the Basic Act on Nuclear Policy in 2002, which legitimized the promotion of nuclear energy as essential for ensuring stable energy provision and addressing climate change (Kamikawa 2018: 154-55). In conjunction with this legislative framework, the government actively advanced various nuclear fuel cycle projects and initiated the construction of new nuclear plants, including the Kaminoseki facility.

This proactive stance on nuclear energy was further solidified in the "Nuclear Nation Plan" (genshiryoku rikkoku keikaku), published in 2006 by a commission under the Ministry of Economy, Trade, and Industry. The plan advocated for several ambitious goals, including the extension of the operational lifespan of existing nuclear plants, the development of fast-breeder reactors, and the export of nuclear technology to other countries (Kamikawa 2018: 164).

Through these measures, the Japanese government sought to reassert its dominance in the nuclear policy arena and counter growing public concerns regarding safety and sustainability, aiming to position Japan as a leader in nuclear energy amidst global energy challenges. However, this push for nuclear expansion would soon face renewed scrutiny and opposition, particularly in the wake of the impending Fukushima disaster.

The promotion of nuclear power in Japan was predominantly driven by the Liberal Democratic Party (LDP). However, it is important to note that the opposition party, the Democratic Party of Japan (DPJ), did not take a strong stand against this policy. In its foundational basic policy published in 1996, the DPJ referred to nuclear power as a "transitional energy," indicating a commitment to gradually reduce Japan's reliance on nuclear energy in the future.

This stance shifted significantly before the Upper House elections in 2007 when the LDP began to experience a decline in public support. In response to this political landscape, the DPJ adopted a more "realistic" approach and redefined nuclear power as a critical source of energy (Asano 2011: 24). This rebranding reflected a broader reluctance among political parties to challenge the prevailing pronuclear sentiment, ultimately hindering substantial efforts for policy change.

5. Backgrounds of failure for policy change

The lack of alliance of opposition parties

This section discusses the consequences of Japanese antinuclear movements, employing a comparative approach to highlight the unique characteristics of Japan's situation. Building on the discussions in Section 3, I will examine three key aspects: the formation of alliances with opposition parties, the establishment of a shared understanding of nuclear policy as a nationwide issue, and the "cultural turn" in movement strategies.

First, Japanese antinuclear activists lacked a strong alliance with any opposition parties. Historically, while the Liberal Democratic Party (LDP) vigorously promoted the introduction and development of nuclear power, antinuclear activists initially found some support from the Japan Socialist Party (JSP). The JSP officially declared its opposition to pro-nuclear policies in the 1970s, positioning itself as a potential ally for activists seeking to challenge the government's stance.

However, the relationship between the JSP and the antinuclear movements was complex. Not all JSP legislators aligned with the anti-nuclear position; some continued to support pronuclear policies, leading to frustration among activists. This inconsistency within the party bred skepticism toward the JSP among antinuclear activists, who were increasingly disillusioned by the lack of a unified stance. Despite these challenges, it is important to note that the relationships between opposition parties and antinuclear movements were generally closer during this earlier period compared to the subsequent decline in collaboration and support.

Antinuclear movements were significantly weakened by the rapid decline of the JSP during the 1990s and 2000s. Once a key political ally of the antinuclear movement, the JSP lost considerable ground in national elections, shrinking its representation to only a few seats. The formation of the Democratic Party of Japan (DPJ) in 1996 drew some legislators away from the JSP, but the DPJ's relationship with antinuclear movements was never as close as that of the JSP.

One reason for this was the DPJ's support base, which included union workers from the electronic and energy sectors, particularly the Federation of Electric Power Related Industry Workers' Unions of Japan. These unions were concerned about potential job losses if nuclear reactors were shut down, making them resistant to supporting antinuclear positions. Furthermore, the DPJ did not prioritize nuclear policy, focusing more on issues like foreign policy and pension reform. Many DPJ members lacked both knowledge and networks needed to address the nuclear issue effectively.

Even when the DPJ was in power from 2009 to 2012, they did not challenge the pro-nuclear stance of the Ministry of Economy, Trade, and Industry (METI). Instead, they followed METI's lead, showing a lack of initiative in developing alternative energy policies or engaging in significant debate about nuclear power (Kamikawa 2018: 193).

The discussions above highlight the inefficiency of Japan's civil society in driving substantial social change, particularly in relation to antinuclear movements. Here, "inefficiency" does not suggest a lack of activist engagement or absence of civil society actors. In fact, activists were highly active at the

grassroots level. However, their efforts did not lead to significant shifts in public discourse or influence on political institutions.

Moreover, this inefficiency was not solely a result of unfavorable political opportunity structures, such as limited state receptiveness to movements. Instead, it often stemmed from the movement's own culture. Activists frequently adopted strategies and tactics that were not necessarily geared toward achieving high-impact social change.

Yet, inefficiency should not be equated with a lack of value. For instance, artistic endeavors are culturally enriching, despite not being efficient in terms of economic productivity. Similarly, grassroots movements have intrinsic value in terms of fostering community engagement and promoting alternative discourses. Nevertheless, the "inefficient" structure posed several challenges for social movements. It limited ordinary citizens' sense of hope in their ability to influence politics or bring about significant societal change. This lack of hope, in turn, diminished their interest and engagement in political processes.

The Failure to Spark a Nationwide Discussion on Nuclear Policy

Second, Japanese antinuclear activists failed to ignite a nationwide discussion on nuclear policy. The debate remained confined to the areas surrounding nuclear plant sites, despite the fact that decisions on nuclear energy were made by the central government. Urban residents, who benefited from the electricity generated by these plants, were largely disengaged from the issue. In contrast, residents in towns and villages near the plants were forced to take a stance—either in favor of or against nuclear power—because they directly faced the risks and consequences.

This division meant that nuclear policy never became a truly national concern. Urban dwellers, distanced from the physical presence of nuclear plants, often remained indifferent, allowing the issue to remain localized and preventing the creation of a broad, unified movement that could challenge the central government's pronuclear stance. This lack of widespread public debate and engagement significantly weakened the antinuclear movement's ability to effect national policy change.

The failure to invoke a nationwide discussion on nuclear policy in Japan can be attributed in part to institutional obstacles to holding referendums. While the right to referendum is constitutionally guaranteed under the Japanese Constitution and Local Government Law, its use is heavily restricted. National referendums are limited to issues concerning constitutional reform, while local referendums are generally confined to administrative decisions, such as whether to merge local governments.

In rare instances, local referendums, like the one in Maki, were held to decide the fate of nuclear plant construction. However, these referendums did not address the broader implications of national nuclear policy. Instead, they focused on localized concerns about how local governments would proceed, without expanding the debate to national energy policy. This institutional limitation prevented antinuclear activists from fostering a more expansive, public discussion that could influence the central

government’s stance on nuclear power, thus stifling the movement’s potential to create a significant impact on policy at the national level.

The DPJ's lack of initiative regarding the referendum system, both in opposition and while in office, contributed to the failure to stimulate a nationwide discussion on nuclear policy. Despite the potential for referendums to raise awareness and spark debate, the party showed little interest in revising the laws needed to facilitate such discourse on a broader scale.

Additionally, the mainstream media played a critical role in curbing a nationwide dialogue on the pros and cons of nuclear power. In modern political systems, the media is instrumental in shaping public interest and awareness of significant issues. However, following the rise of antinuclear movements after the 1986 Chernobyl disaster, the pronuclear "Nuclear Village" felt increasingly threatened by growing public concern over nuclear safety. In response, power companies and other members of the Nuclear Village devised a "Buying the media" strategy, significantly increasing their public relations budgets to fund extensive pronuclear campaigns. These campaigns promoted the benefits of nuclear power, while downplaying the risks, thus suppressing critical voices in the media and preventing nuclear power from becoming a nationwide issue.

This strategic media control allowed the “Nuclear Village” to shape the public narrative, reinforcing the safety and necessity of nuclear energy while minimizing attention to the antinuclear movements, effectively dampening widespread public debate on nuclear policy.

The media's reluctance to criticize power companies operating nuclear power plants was largely due to their financial ties to the nuclear industry. Many media outlets relied on sponsorship from these companies, which created a conflict of interest that influenced their reporting. Following the Chernobyl disaster, this relationship became even more pronounced, as power companies significantly increased their sponsorship budgets to maintain a favorable public image.

As a result, instances of censorship were not uncommon. Power companies often pressured media organizations to remove or alter news reports that contained critical perspectives on nuclear energy or raised safety concerns. This preemptive censorship compromised journalistic integrity and limited the media's ability to act as an independent watchdog over the nuclear industry. Rather than fostering a robust public discourse on the safety and implications of nuclear power, the media frequently reinforced narratives that aligned with the interests of the Nuclear Village, contributing to a broader environment of complacency and hindering critical discussions about nuclear energy in Japan.

PR campaigns were also conducted within government institutions, particularly at the Science and Technology Agency and the Ministry of International Trade and Industry (MITI). While these campaigns did not necessarily shift public opinion to a pro-nuclear stance, their substantial budgets were sufficient to hinder antinuclear activists from sparking a nation-wide discussion about the validity of nuclear policy. This resulted in a stifled dialogue on critical issues surrounding nuclear energy, leaving many citizens uninformed or misinformed.

The lack of a “cultural turn” in the movements

The third aspect of lessons drawn from the discussions about the legacy of Taiwan’s antinuclear movements is the increasing independence of these movements from political parties. This independence is particularly significant when examining the "cultural turn" of the movements, which emerged as activists sought to establish a distinct identity apart from the Democratic Progressive Party (DPP).

In the 1990s, as street mobilizations diminished and the prospects for policy change seemed remote, Japanese antinuclear activists began shifting their focus to transforming their personal lives. Many saw the reduction of dependence on electricity as crucial to their goal of ending nuclear power. This shift marked the emergence of a "cultural turn" within the movement, where lifestyle changes became as important as political activism.

One notable example of this shift is Ogiso Shigeko, an antinuclear activist who, in 1993, migrated from Toyohashi city in Aichi prefecture to the rural town of Tsunan in Niigata prefecture. There, she renovated an old house and adopted a self-sufficient lifestyle, growing her own food and reducing her reliance on electricity. Although Ogiso remained involved in antinuclear protests, she believed that real change required minimizing personal dependency on the very systems that supported nuclear energy. Her lifestyle change was a statement against the need for centralized electricity production, much of which came from nuclear power.

This cultural turn was not unique to Ogiso. Many other activists also shifted their focus from purely political actions, such as protests and policy advocacy, to cultural and personal transformations. They began to see cultural change—embodied in everyday practices such as self-sufficiency, energy conservation, and sustainable living—as a necessary complement to political activism. A sign of the "cultural turn" in antinuclear movements emerged in both Japan and Taiwan after the decline of the post-1986 protests

A number of screening events on the nuclear issue emerged in the 2000s. Kamanaka Hitomi's *Rokkashomura Rhapsody*, released in 2006, played a key role in raising awareness among young people unfamiliar with the nuclear issue, much like Tsui Susin's *How Are You, Gongliao?*. Kamanaka’s film is set in Rokkashomura, a small village in Aomori Prefecture, where nuclear fuel cycle facilities were constructed. It portrays the lives of local people and the impact of these facilities on their communities. While the residents do not vocally oppose nuclear power, the film is structured in a way that encourages viewers to see nuclear power as their own concern, rather than someone else's. *Rokkashomura Rhapsody* was shown in small theaters and at voluntary screening events across the country.

Around 2010, a number of young people became involved in protests against the construction of the Kaminoseki nuclear plant in Yamaguchi Prefecture. Kaminoseki, a small coastal town, became a

focal point of heated debate as the construction plan moved forward. Many of these young protesters were drawn to the area's natural beauty and local way of life, prompting them to join the opposition. While the protests were not large in scale, these young activists played a key role in bridging the gap between urban residents and local protesters, fostering connections and raising awareness of the issue beyond the immediate region.

However, these signs of change were marginalized both within the antinuclear movement and in Japanese society as a whole. The scale of young people's participation remained too limited to spark a "cultural turn" across the entire antinuclear movement. Antinuclear organizations were unsuccessful in forging alliances with other emerging movement groups of the period, such as the global justice and anti-poverty movements. Scholars such as Chiavacci and Obinger have referred to the period from the 1970s to the 2000s as the "ice age" of Japanese civil society (Chiavacci and Obinger 2018). During this era, New Social Movements (NSMs), including environmental movements, were less prominent in terms of protests and advocacy events (Higuchi et al. 2008; Nishikido 2012). Antinuclear movements, hampered by the long-term decline in street mobilizations, failed to break the deadlock within Japan's civil society. As a result, this new wave of cultural activism did not offer an alternative path for antinuclear activists who were struggling to achieve meaningful policy change.

It should be noted that the limited participation of young people in antinuclear movements partly stemmed from the absence of direct action, which tends to resonate with younger generations dissatisfied with the failures of representative democracy. Direct action, however, was heavily restricted by strict police control in Japan (Ando 2013). A series of laws and regulations supported this approach to protest policing. Public safety ordinances (*koan jorei*), enacted by local governments in the early postwar period, gave the police authority to regulate street actions such as demonstrations. In addition, laws such as the Road Traffic Law, charges of trespassing, and interference with public officers were often used as grounds for arresting activists. Antinuclear activists were not immune to this strict control. For example, in 1988, during actions to stop power control operations at the Ikata nuclear plant, an activist was arrested and prosecuted simply for distributing anti-nuclear stickers on the street.

The images of activists portrayed in the media played a significant role in enabling the police to control these individuals without fear of backlash from the public. These negative portrayals stemmed from the legacy of the New Left movements in the 1960s. The police successfully created a stigma around the New Left, labeling them as "extremists (*kagekiha*)" who were willing to cause trouble in pursuit of their political goals, such as revolution. Even in the aftermath of the Chernobyl disaster, the mainstream media continued to propagate images of activists as selfish and violent. This portrayal influenced public perception, leading to hostility toward direct actions taken by activists on the streets.

Consequently, the combination of strict policing and the stigma associated with activism discouraged young people from engaging in direct action, depriving them of the opportunity to

participate meaningfully in politics. The media's role in this dynamic hindered Japanese antinuclear movements from effectively recruiting the younger generation.

The cultural turn played a significant role in expanding the support base of Taiwan's antinuclear movements. This shift was designed to prevent the movements from being alienated from the public, especially after their rapid politicization following the Fukushima disaster. In contrast, the absence of such a cultural turn left Japan's antinuclear activists at risk of becoming isolated from the public during the post-3.11 period.

6. Conclusion: Continuities and discontinuities in the post-Fukushima disaster period

After the Fukushima Daiichi nuclear disaster in March 2011, political opportunities became more favorable for Japanese antinuclear movements. The mainstream media began to expose political corruption within the Nuclear Village and raised concerns about the safety of nuclear plants, leading to a significant shift in public opinion. One of the crucial cases is that the Fukui District Court ordered the Kansai Electronic Power Company to halt operations of Takahama nuclear plants in April 2015. The judge avoided extremely abstract discussions about the scientific validity of nuclear power plant safety inspections. Rather he claimed that considering the seriousness of nuclear accidents, the plants were not safe enough to restart (Kawai 2015: 80).

The shift in public opinion supported changes in judicial decisions, particularly in cases involving requests for injunctions against the resumption of nuclear plant operations. Approximately one year after the disaster, the government began moving to restart plants that had been shut down. Antinuclear activists, concerned about safety, initiated legal actions to prevent these restarts (Kawai 2015: 41).

While changes occurred, particularly in the media and the judiciary, the Nuclear Village was revitalized after the LDP returned to office in December 2012. This revival is evident in the formulation process of the Basic Energy Plan, which outlines the government's long-term strategy for energy supply and demand and is revised every three years.

During the DPJ administration, the Plan aimed to eliminate reliance on nuclear power by the 2030s. However, the 2014 revision reclassified nuclear power as an "important baseload energy." The 2021 revision set a goal to increase the proportion of nuclear power to 20-22% of the total electricity supply by 2030. Achieving this target would require the restart of nuclear plants and the extension of their operational lifespans.

The Plan was discussed among members of a subcommittee on nuclear issues within the Advisory Committee for Natural Resources and Energy at METI. The composition of the committee lacked impartiality, with only two out of 19 members advocating for a reduction in Japan's reliance on nuclear power; the others supported pronuclear policies. Many members hailed from the nuclear industry, including scholars specializing in nuclear engineering. This lack of impartiality in the composition of

government council members mirrored the situation prior to the Fukushima disaster. Consequently, the influence of the "Nuclear Village" in the decision-making process regarding nuclear policy did not significantly change after the disaster.

The consequences can, to some extent, be explained by the legacy of antinuclear movements during the inter-disaster period. First, a continuous alliance between these movements and political parties remains lacking even today. Few political forces in the Diet advocate for policy change on behalf of the movements, which has resulted in the reproduction of an inefficient structure within civil society regarding social change. Although the scale of street mobilization in Japanese antinuclear movements after the Fukushima disaster was comparable to that of other countries, including Taiwan, their demands have not been translated into effective policies or laws.

Second, the nuclear issue remains localized. As mentioned earlier, the mainstream media initially reported on the disastrous casualties of nuclear accidents and questioned the validity and legitimacy of nuclear policy. These reports sparked a nationwide discussion about the nuclear issue. However, a turning point occurred in 2013 when the LDP returned to power and Tokyo was selected to host the Olympics. Following this, the mainstream media began to emphasize that Fukushima was making progress toward “reconstruction (*fukko*)” and reduced their coverage of the debates surrounding the pros and cons of nuclear policy.

It is true that the Taiwanese media was not initially supportive of antinuclear movements. However, Tan Uichi noted that after the Fukushima disaster, the Green Citizens' Action Alliance (GCAA) formed a partnership with the Mothers’ Alliance for Monitoring Nuclear Power Plants, established in March 2013. The core members of this alliance were prominent figures from the business and entertainment sectors (Tan 2024: 146). This collaboration gave the movement easier access to mainstream media, helping to prevent its marginalization.

In contrast, the antinuclear movement in Japan did not experience similar mainstream media visibility. The nuclear issue has been relegated back to a local concern due to the decline in media coverage. Given the limited access to the Diet, mainstream media reports are crucial for Japanese antinuclear movements to elevate the pros and cons of nuclear power to a national level. This reliance on media was established during the inter-disaster period and has not changed following the Fukushima Daiichi nuclear disaster.

Nevertheless, operating nuclear power in the same manner as before the disaster will not be feasible. Safety standards have been strengthened since the Nuclear Regulation Authority was established in 2012. Judicial decisions are not always favorable to the promotion of nuclear power. Additionally, the Japanese government and power companies cannot evade the issue of nuclear waste disposal. Considering these economic and social costs, the resurgence of nuclear power is unlikely to endure. However, Taiwan’s experience demonstrates that political decisions are essential for closing nuclear plants. Given that Japanese antinuclear movements lack access to political institutions, the promotion

of nuclear power will likely continue, even though the public recognizes it is not sustainable.

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