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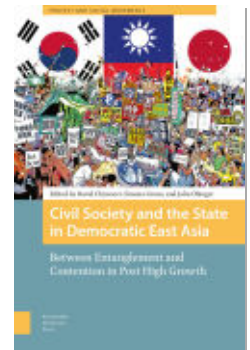
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4 The Campaign for Nuclear Power in Japan before and after 2011

Between State, Market and Civil Society

Tobias Weiss

Abstract

In the chapter I analyse the emergence of a countermovement in reaction to the rise of the movement against nuclear power in Japan since the 1970s. I trace the emergence of the countermovement in historical perspective, and analyse the organizational and social basis, the mobilization processes, the framing, and political influence of the groups involved. I then analyse the political impact of the Fukushima 2011 nuclear accident on the movement. I show how the countermovement was able survive a period of intense contestation preserving its resource basis and retaining significant influence on the policymaking process due to support from parts of the national bureaucracy and conservative politicians.

Keywords: social movements, Japan, countermovements, civil society, nuclear power

The recent wave of conservative movements poses a challenge to researchers of civil society. Can civil society be conservative or even reactionary? While Heinrich (2005) argues for discerning certain progressive values (for instance, adherence to human rights and gender equality) to empirically identify *civil* society actors and organizations, Way (2014) holds that civil society can be found in both progressive and conservative sectors of society as long as they are organized and distinct from the state and from the market. In this chapter I will adapt the latter approach focusing on organized groups seeking to preserve existing interests and policies in Japanese nuclear power

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politics. This approach contrasts prevailing tendencies to focus mainly on the progressive sectors of civil society (for similar assessments see Katz 2006; Fuchs 2018; Meyer and Staggenborg 1996; Ho, in this volume).

Observers have asked why a strong movement against nuclear weapons (in the 1950s) and an environmental movement (in the 1970s) developed in Japan, but the movement against the civil use of nuclear power remained much weaker (Avenell 2012). In this chapter I will analyse the campaign to promote the civil use of nuclear power as a countermovement (directed against the movement against nuclear power) taking place at the intersection between civil society, the market and the state. While it is hard to gauge its effects on the anti-nuclear movement, by scrutinizing the mobilizing structures, framing, and political influence of the movement, I aim to complement existing explanations of the relatively limited strength of the anti-nuclear movement before 2011 and shed light on future prospects for Japan's nuclear energy policy.

Developmental states have been associated with a strong state and a weak civil society (Hsu 2012). The category 'developmental state' is connected to the dynamics of late development analysed by Gerschenkron (1962). The state assumes an important role in political economies developing in an international environment where other countries have already set the path. Developmental state theorists like Johnson (1982) took up this argument and identified a strong and autonomous national bureaucracy, an economy managed through industrial policy and a relatively weak legislative branch as elements typical of the developmental state. In this model the state is the main driver for political and social change, marginalizing groups that defy its goals of economic growth and modernization. Civil society remains weak (Pekkanen 2004: 363).

While hardly anyone would deny the strength of the Japanese state during most of the Cold War period and its ability to accomplish developmental goals, scholars of Japanese civil society note the blurriness of the boundaries between civil society and the state. Garon (1997) argues that the penetration of the Japanese state into peoples' everyday life does not necessarily have to be interpreted as one-sided movement. A (social) movement in this view can originate within state agencies or outside of it. Movements originating within state agencies can be taken up and advanced by social forces outside of the state (or market). A campaign according to Garon (1997: 3-20) might be managed by state agencies, but it also involves the mobilization and collaboration of parts of civil society. Garon emphasizes that, in order to understand the emergence and dynamics of campaigns, the relation between state and civil society should be conceptualized not as exclusively oppositional, but as multilayered and multidirectional.

Post-war Japan has seen multiple campaigns, for example, the New Life Movement (Shin Seikatsu Undō) aimed at ‘modernizing’ the household and defining certain gender roles (Gordon 1997) and the Productivity Movement (Seisansei Undō) aimed at increasing industrial productivity (Gordon 1998). These campaigns were initiated by government agencies or influential groups within the state or market sectors, but the agents of the campaigns were never limited to these sectors. While I would argue that at least some campaigns can be seen as countermovements, aiming to deflect or absorb challenges to the state or powerful elites, the most active promoters were not always bureaucrats or politicians. Even if a campaign might originate within the state, the spread of it and its success depended on the resonance it was able to produce within civil society. To analyse campaigns, I would argue that a focus on the links between state, market and (civil) society is important – for instance, on foundations or public policy companies often managed in cooperation between private industries and the bureaucracy. The success of campaigns might depend not only on the power of the state, but also on the dynamics between movements and countermovements in specific sectors of society.

My main interest here is how the countermovement emerged and how the Fukushima nuclear accident in 2011, which was perceived by many as a failure of the Japanese developmental state, affected the pro-nuclear campaign.¹ I will start sketching the emergence of the pro-nuclear campaign, as reaction from state and nuclear industry to a rising anti-nuclear movement since the 1970s using documents and statements from the actors involved. In the following section I will analyse the mobilizing structure, the framing and the political efficacy of the campaign prior to 2011. In the final section I will trace changes after the Fukushima nuclear accident. We can see that a ‘developmental’ alliance between companies, the bureaucracy and the conservative party built up a strong countermovement, especially in professional circles connected to the nuclear industry and local communities hosting facilities. I argue that this countermovement adopted a strategy used by company managers in the labour struggles from the 1950s on. Before 2011 parts of the movement were transformed to non-profit organizations and held significant resources and influence on policymaking, deflecting also challenges from sectors of the bureaucracy pushing for liberalization of the energy market. Mainly due to its strong resource base and political networks the countermovement survived the 2011 accident and retained resources and some political influence, even though its power over policy making was weakened.

1 I use the terms ‘pro-nuclear civil society,’ ‘movement’ and ‘campaign’ interchangeably here.

The Pro-nuclear Campaign

The Emergence of a Pro-nuclear Campaign

The emergence of a pro-nuclear campaign in Japan was a reaction to the rise of environmental citizen movements in the early 1970s and increasing local resistance to the construction of nuclear power plants. The atomic bombings of Hiroshima and Nagasaki had led to the emergence a strong movement against nuclear weapons. In 1954 popular opposition to the development and use of nuclear weapons surfaced after a Japanese fishing boat was hit by radioactive fallout from a US nuclear weapon test (Utsumi 2012). A housewife initiated a petition against nuclear weapons, eventually gathering 30 million signatures, and a countrywide social movement against nuclear weapons emerged. While this movement must have triggered ambiguous feelings among conservative political circles (Arima 2008), the opposition to nuclear weapons did not naturally translate into opposition against the 'peaceful use' of nuclear power for electricity production. It was argued by progressive as well as conservative parties that Japan as the only victim of atomic bombs had to become a forerunner in the peaceful use of nuclear power (Weiss 2019a: 193-196, 243-246). In the 1950s, over 600 Japanese companies joined the newly established Japan Atomic Industrial Forum (Yamaoka 2015: 235). The US embassy together with various Japanese newspapers conducted countrywide exhibitions promoting the peaceful use of nuclear power under the Atoms for Peace programme. The founding of the Japan Atomic Industrial Forum (JAIF), the federation of the nuclear industry, in 1956 was the precursor of the pro-nuclear campaign starting in the 1970s. The JAIF established local atomic forums (*genshiryoku kondankai*) in Kansai, Chūbu and Ibaraki. These forums not only included managers of companies aiming to build up a nuclear industry, but also journalists and influential regional power holders, for instance, leaders of fishing cooperatives and housewives' groups (see, for example, HGK 2002: 8). From the start this campaign might also have aimed to counter the success of the movement against nuclear weapons, but since there was not any substantial opposition against the civil use of nuclear power, it is not clear whether we can speak of a countermovement before the 1970s.

The Environmental Crisis

In the early 1970s there was a sense of crisis in the long-term ruling party, the conservative Liberal Democratic Party (LDP) and the Japanese business

community. Opposition parties had made gains in local elections and had taken hold of various local governments. Countrywide protests against cases of pollution were on the rise and had forced the conservative government to pass stricter legislation for environmental protection (McKean 1981). The PR manager of the utility company TEPCO (Tokyo Electric Power Company) in retrospect decried the ‘anti-company mood’ in Japan during this period (Suzuki 1983: 15). At the same time Japan was affected by the oil crisis. The oil shock in 1973 caused a strong recession, and policymakers worried about the safety of future energy supply. A group of conservative intellectuals, under the name Group 1984, published a manifest claiming (Group 1984 1975: 99):

The Japan of the 1970s did not make the stupid mistake to start an international war over raw materials. But it turned the war about raw materials into a civil war. This was an extremely unwise move. The safe long-term supply with raw materials can hardly be maintained anymore. If we don't take revolutionary measures here, the Japanese economy will face physical annihilation!

This statement is the expression of an at the time widespread belief among policy makers and industry managers that ‘the energy question’ would decide the future of Japan's industrial development and that intensive efforts would have to be made to acquiesce Japan's population to accept nuclear power plants.

Organizations Connecting State, Market and Civil Society

Three foundations played important roles organizing such ‘revolutionary measures’ in nuclear power policy, which included the expansion of nuclear power generation and a strategy to achieve public acceptance for it: the federation of the nuclear industry, JAIF; the Japan Atomic Energy Relations Organization (JAERO); and the Japan Productivity Center (JPC).

Japan Atomic Energy Relations Organization (JAERO)

JAERO's Japanese name means – when translated literally – ‘Foundation for Fostering a Nuclear Culture’ (Genshiryoku Bunka Shinkō Zaidan). It was founded originally in 1965 as the Center for Nuclear Power Dissemination in Ibaraki, where many facilities of nuclear power research and production had been built. JAERO's official history explains the purpose of its founding

with 'special feelings' (*genshiryoku ni taisuru tokushu kanjō*) of the Japanese populace towards nuclear power (JAERO 1994: 232). The upgrading of its activities to a national scale in 1969 can be understood in the context of protests against American nuclear submarines and warships entering Japanese harbours, for example, during the 'struggle of Sasebō' in 1968. Prime Minister Eisaku Satō had bemoaned the 'nuclear allergy' of the Japanese people (Hook 1984). JAERO's activities include the targeting of important segments of the population with nuclear power PR: scientists, teachers, doctors, journalists and the local population near nuclear power plant sites (JAERO 1994). JAERO's official history mentions the 'need to bring together various segments of society to promote nuclear power' (JAERO 1994: 239).

Japan Productivity Center (JPC)

The JPC, the organizational hub of the Productivity Movement (Seisansei Undō), organized by a coalition of the conservative labour unions (Dōmei federation), the Ministry of International Trade and Industry (MITI; since 2002: Ministry of Economy Trade and Industry; METI) and business federations, which, from the 1970s, began to play a role in nuclear politics. In 1972 it convened the First Industry Conference on the Environmental Problem (Daiichi Kankyō Mondai Sangyō Kaigi), bringing together about 200 business managers, scholars and bureaucrats. Participants called for a 'neutral third-party movement' (NSH 1972: 63) to check the challenge of the environmental movement. The Japan Social Economic Conference (Shakai Keizai Kokumin Kaigi) was established as a sub-organization in the JPC focusing among other issues on establishing consensus on the nuclear power issue. A key person was Hidezō Inaba, an economist, member of the Atomic Energy Commission (JAEC) and former bureaucrat of the Cabinet Planning Board (Kikakuin), the prewar 'economic general staff' and centre of industrial planning, according to Johnson (1982). From the 1970s, Inaba worked to create a 'neutral third-party movement' for the public acceptance of nuclear power (Ebina 1992: 185). The 'neutral third-party movement' was essentially a countermovement against the anti-nuclear movement. This becomes clear when we look at the social groups targeted by the movement and the history of its organizational base, the JPC.

1950s: Countermovement in Labour Politics

The JPC had been established in 1955 during a period of intense labour conflict. At that time public and private sector unions organized a large share

of workers in the Sōhyō labour federation, mobilizing them for demonstrations, making political demands and supporting the oppositional Japan Socialist Party (JSP). The Productivity Movement was initiated by an alliance of conservative labour activists in the Dōmei unions (politically supporting the right wing of the JSP, which in 1960 split and formed the Democratic Socialist Party, DSP), company management and MITI bureaucrats. Inaba was among the first generation of JPC board members (NSH 2005). The JPC was part of a larger drive to curb the influence of Sōhyō and activist unions close to the Communist Party. It contributed to making Dōmei the largest labour federation in the private sector (as opposed to the public sector, where Sōhyō remained strong; see Gordon 1998). The countermovement utilized existing hierarchies in the workplace, mobilizing older foremen and workplace leaders in 'informal organizations' (Suzuki 2003) aiming to isolate 'leftist' elements. When the campaign succeeded in taking over control of many unions in the private sector, the Sōhyō and communist-affiliated unions began to create cultural circles in order to maintain their organizational bases. To counter this, companies built 'independent' leisure circles (Gordon 1997).

1970s: Countermovement in Nuclear Politics

Inaba's 'neutral third-party movement' was essentially the organization of a countermovement modelled after 'informal organizations' and 'independent leisure circles' in nuclear politics. In the 1970s the civil use of nuclear power became increasingly contested in Japan. Union members, consumer advocates, critical scientists, and lawyers cooperated with the opposition parties to mobilize protests against the siting of nuclear power plants. The time needed to build the reactors increased (Aldrich 2008). In 1974, the government's nuclear policy suffered a major defeat when Japan's first nuclear-powered ship was blocked re-entrance into its home port by angry fishermen after a radiation leak (JAERO 1994: 240).

To counter these trends the JPC started mobilizing Dōmei union members. The JPC held regular 'energy seminars' from 1976 to 1981, inviting union members, journalists and academics emphasizing the need for nuclear power. It also started organizing 'grassroots movements' based on local Dōmei and DSP organizations and local business groups, starting with a 'meeting of people in Shimane prefecture for the promotion of nuclear energy' (Suzuki 2016: 598). In the same year Japan's first 'pro-nuclear citizen group,' Energy and Life-Citizen Group, was founded by a nuclear engineer. The founder had worked as consultant for companies and think tanks in the nuclear industry and later founded two companies offering services

related to the ‘public acceptance’ of nuclear power (Minakuchi 2016). In the group’s newsletter he conceded that most of the 300 participants had been union members in companies in the nuclear industry (EKSKH 1998). In a newspaper article the group was introduced as ‘founded by heavy machinery and utility union members and nuclear power researchers’ (AS 1989b). It aimed to ‘expand the discussion’ concerning nuclear power and contribute to a ‘healthy energy development’ in Japan. While this pioneer group of the ‘pro-nuclear civil society’ did not survive until 2011, a multitude of similar groups appeared from the early 1990s on.

The Regional Base of the ‘Pro-nuclear Civil Society’

Through a subsidy system installed in 1974, JAERO, JPC and other government-affiliated foundations in alliance with utility companies and JAIF became suppliers of capital to local and national subcontractor groups. Local sub-leaders play an important role in mobilizing members through relatively hierarchical, clientelist networks (for details on mechanisms of mobilization, see Weiss 2019b). This hierarchical element is also visible in the regional atomic forums of JAIF. Dense personal and institutional networks managed by local power holders (*yūryokusha*) allowed the regional nuclear forums to mobilize large parts of the local populations. Local atomic forums were in most regions built inside the local chambers of commerce (*shōkō kaigisho*), which were at the same time a support base of the LDP (Taguchi 1960). From the organizational structures of JAIF and the spatial concentration of other ‘pro-nuclear groups’ it appears that this is especially true for regions where nuclear power plants came to generate an important share of public and private income like the prefectures of Fukui, Fukushima, Aomori and Ibaraki, hosting multiple nuclear power facilities.² For instance, the Hokuriku Nuclear Forum, established in the 1970s, mobilized a large number of private companies (including newspapers and TV stations) in the three prefectures of Hokuriku and included representatives of most universities, some schools, and the agricultural and fishing cooperatives as well as housewives’ federations (*fujinren*) and young men’s federations (*seinendan*) of the three Hokuriku prefectures (HGK 2002: 3). This encompassing mobilization can probably be attributed

2 The concentration of multiple facilities in a few locations is connected to the fact that it is easier to convince communities already hosting one reactor to accept a new one. Also, host communities come to rely on subsidies and tend to accept additional reactors providing resources to maintain public income at a high level.

to top-down calls for mobilization via mid-level local leaders, the prevailing mode of organization of conservative associations at that time (compare Taguchi 1960). Progressive groups like the prefectural Sōhyō unions were not included, however, presumably because they were opposed to nuclear power or at least opposed to the conservative organizations at the time the forum was set up (HGK 2002: 3, 8). Local volunteers were recruited through a 'nuclear power monitor' system created in 1978 by the Science and Technology Agency. For this programme a number of local opinion leaders were handpicked by governments of prefectures where nuclear power plants were located to communicate the safety of nuclear power and gather people's opinions (Interview FNRAJG 2017). The system was put in place shortly before a reform that increased the frequency of public hearings on the building of nuclear power plants (AS 1979).

1980-1990s: Expansion of the Countermovement

Honda (2005: 79-85) notes that with the victory of conservative unionism leading to the founding of the Rengō federation (the merger of Sōhyō and Dōmei union federations proceeded in the 1980s), the basis of the anti-nuclear movement in labour unions was significantly weakened. Since the early 1980s, however, a 'new wave' of the anti-nuclear movement had risen. This 'new wave' emerged from a stratum of middle-aged housewives organized in consumer groups (JAERO 1994: 133). In alliance with youth groups and older activists from the 1960s student movement, they staged protests against a test at the Ikata nuclear power plant in 1988 and the building of a nuclear fuel reprocessing plant in Aomori in the early 1990s (Suga 2012). On the local level, residents' movements were aided by a series of scandals and accidents in the nuclear industry from the 1990s (Yoshioka 2011). They succeeded in stopping two construction projects as well as the use of plutonium-enriched fuel in one location (Honda 2005). Also, in the late 1980s and early 1990s, international environmental groups gained a foothold in Japan (Mason 1999). The international NGO Greenpeace, for instance, staged protests against the transport of reprocessed plutonium from Europe to Japan (AS 1992). Suga (2012) argues that this 'new wave' was the most substantial challenge to Japanese nuclear power policy in Japanese history. In this situation the countermovement sought to expand its influence to weaken the social basis of protest activity.

The local atomic forums had targeted women using existing networks, including parent-teacher associations and women's groups, to screen PR films and invite researchers and celebrities to deliver talks directed at

female audiences. In Hokuriku the targeting of housewives started in 1979 (HGK 2002: 8). These groups expanded through the mobilization of female employees of the nuclear industry, related businesses and the use of family and local networks (Weiss 2019b). Most local JAIF groups organized women's groups under (at least nominally) separate organizations (see Weiss 2019b: 5-13). The prefectural groups were organized into subgroups on the local town and village level. In some towns where plants are located these groups claim impressive membership numbers. For instance, the Takahama Women's Net in the town of Takahama, a community with 10,000 residents hosting four nuclear reactors, claims to have 1,300 female members (Weiss 2019b). If we take the female population to be around 50%, this would add up to one-quarter of the female population. While the 'pro-nuclear groups' might have an interest to inflate their membership, and thus the numbers cannot be taken at face value, encompassing mobilization is surely related to the strong reliance of host communities on subsidies and economic benefits accompanied by the building and operation of nuclear power plants.

The 1990s and early 2000s saw the emergence of various 'pro-nuclear consumer and environmental groups.' From 1989, JAERO took responsibility over the nuclear power monitor system. The dispatch of speakers (*kōshi-haken*) for various kinds of events was stepped up. Subcontractors of JAERO and other companies and organizations connected to the nuclear industry started to conduct regular education seminars for opinion leaders from various social strata to educate them about energy issues, radiation and related topics. These opinion leaders are then mobilized to spread their 'educated opinion' among followers and the general public on symposia and various kinds of events. In 1989 TEPCO alone was dispatching speakers to a hundred events per month (AS 1989a). Government agencies, other utilities and semi-private groups sponsor additional symposia, workshops etc. Together, the multiple events by various organizations make for a large-scale pro-nuclear education campaign.

After an accident in Japan's fast-breeding reactor in 1995, the monitor programme's scale was expanded (JAEC 1996). Another programme supplying speakers for nuclear power education events had been installed in 1979. METI cooperated with businesses to create a programme aimed at building up a corps of consumer advocates outside the framework of the pre-existing (relatively independent) consumer movement. These consumption life advisors (*shōhi seikatsu advisor*) were recruited mainly among housewives. They are trained to mediate between consumer interests and businesses. Consumption life advisors are hired by companies. They listen to consumers and represent their perspective within the companies, helping to develop

better products (AS 1980). A foundation was created by MITI to develop the curriculum, conduct professional examinations, and certify the education of graduates of this new programme. Today about 14,000 consumption life advisors are represented in a nationwide network of NPOs and federations (NSK 2012). TEPCO, for instance, became a major employer of consumption life advisors (Hōgaku Shoin Henshūbu 1999).

In the 1990s, the Ministry of the Environment also created a programme to educate a corps of environmental counsellors (*kankyō counselor*). Similar to the consumption life advisors, environmental counsellors are hired by companies to mediate in cases of conflict over environmental issues, or to lecture about compliance and social responsibility; they also obtain employment from public agencies (Kozumi and Sasaki 2010). While only a part of all consumption life advisors and environmental counsellors deal with nuclear power, both often appear as pro-nuclear speakers in local and national advisory councils and as lecturers on events and hearings sponsored by the nuclear industry together with direct stakeholders like scientists and employees of the nuclear industry (Weiss 2019b).

Within the JPC, an umbrella organization named Energy Think Together (ETT) was created in 1990 aiming to ‘think about energy, everybody together, and spread the information gained this way’ (ETT 2017). In 1991, an informal advisory council financed by the Science and Technology Agency and run by JAERO was installed to come up with a ‘strategy for public acceptance of nuclear power.’ This document, whose main authors were not bureaucrats, but think tank employees, journalists and scholars, put housewives in the centre of attention of nuclear power PR: ‘Women trust local consumer centres. They have a strong interest in the environment. If we can co-opt the leaders of such centres, they would make for strong allies’ (GPAHI 1991). Various ‘pro-nuclear citizen groups’ emerged promoting ‘environmental protection through nuclear power,’ ‘energy education,’ ‘energy from a consumer’s perspective,’ and ‘radiation education’ (for an overview of these groups, see Weiss 2019b).

Before 2011: An NPO Boom?

In 2000 the Science and Technology Agency’s radiation monitor programme was terminated. Starting around the same time multiple non-profit organizations (NPOs) promoting nuclear power began to appear. There had been a change in legislation in 1998, creating this new type of association. This led to an ‘NPO boom,’ the rise of a non-profit sector of about 70,000 organizations (Ogawa, this volume). The nuclear industry apparently saw

promise in using NPOs to promote nuclear power. On the national level, utilities like TEPCO and Kansai Electric Power sponsored women's groups focusing on consumer issues and environmental protection. An umbrella group named Asuka Energy Forum – active in the market areas of TEPCO and the utilities of Tōhoku, Hokkaidō, Chūbu, Hokuriku (except Fukui) and Chūgoku³ with local women's subgroups in various nuclear power plant locations and smaller cities – was created in 2001 and became an NPO in 2003. This group claims to have twelve local subgroups, some of them also registered as NPOs (Weiss 2019b: 5-13). Kansai Electric Power sponsored its own NPO in 2001. Another NPO was co-opted by Denjiren, the federation of utility companies. Its activities initially aimed at spreading ideas of recycling and waste management in Japan (see Weiss 2019b). From 2007 the group became a partner of the government's search for a nuclear waste disposal facility co-sponsoring several workshops. Asuka and the respective local groups started to conduct and promote various kinds of activities to attract new people to their activities. These activities are at times reflected in the names of the local subgroups. One of them, for example, is the Readers Circle Aomori, founded in 1995, and another local group is simply called Free Time, founded in 1993 (Weiss 2019b). The activities described in Asuka's newsletter range from regular 'energy cooking' with celebrities to local 'energy talks' for women and power plant and facility tours (AEF 2001-2012). Asuka and other groups also placed expensive advertisements in newspapers to attract new members (Sugimoto 2013a).

Nuclear scientists and technicians also began to found various NPOs in the 2000s. A name appearing in multiple groups is that of Akito Arima. Arima is a nuclear physicist and became head of Tokyo University in the 1980s and LDP Diet member and Minister of Education in 1998. During the 1967-1968 student movement he had been appointed special assistant of the president of Tokyo University to handle the measures against revolting students. When he became president of Tokyo University in the 1980s, he started a drive to collect funds from the private sector to upgrade the university's facilities (AS 2015a, AS 2015b). Arima is in the board of six NPOs and other groups engaged in nuclear-power-related activities (Weiss 2019b: 5-13).⁴ Other nuclear engineering professors founded similar groups and

3 Until 2011 the electricity market was split into ten regional utilities, each controlling electricity production, distribution and sale in its area.

4 These are the Radiation Education Forum (founded 1994, NPO in 2000), the Internet Journalist Association (2002), and the groups Thinking about the Earth Group (founded 2007, inactive), Japan Energy Conference (founded 2012), Japan Energy Policy Forum (founded 2012) and the National Nuclear Conference (founded 2014).

NPOs. Like the NPOs targeting women, they conduct lectures and symposia about the effects of radiation and the need for nuclear power and its safety. While some of them concentrate mainly on research and academic activities, all of them are engaged in nuclear power PR to some extent (Weiss 2019b: 5-13). The researchers often team up with representatives of the women's NPOs to combine a 'consumer perspective' on nuclear power with scientific knowledge (for example, in the energy talks conducted by Asuka; AEF 2001-2012). Like the women's NPOs, they receive subcontracts for PR and workshops aiming to find a site for a nuclear waste disposal facility from the government and the nuclear industry (see below). There are also groups organizing journalists, media celebrities, business elites and policymakers (on the national level) as well as businessmen and teachers from communities with nuclear plants. Some of them have NPO status, some not. It appears that parts of the groups organized in JAIF forums were transferred to NPOs and groups with a more modern appearance.

The various pro-nuclear groups receive substantial amounts of money as subcontractors for the government and the nuclear industry, as well as donations. Two sources of financial support deserve special attention.

(1) Until 2011, utilities in Japan were endowed with regional monopolies. The energy prices were proposed based on cost projections by the utilities and are subject to permission by METI. In the projection of costs, public relations and public acceptance measures were included under the label 'development and diffusion costs' (*fukyū kaihatsu kankeihi*) of nuclear power plants. Informal meetings, advertisements, facility tours, the dispatch of speakers as well as costs of PR facilities can be financed through the electricity fees. Due to this way of budgeting the utilities have the financial means for various kinds of activities. There are extraordinary amounts of electricity money (*denryoku money*) available in public relations campaigns. A journalist traced the trend of development and diffusion costs over 40 years and concluded that they were elevated as a countermeasure to the loss of trust each time after a major nuclear accident. From 1990 to 2011 these costs exceeded €650 million⁵ per year (Komori 2012a).

(2) In addition to the electricity fee, a rich subsidy system for communities hosting power plants was installed in 1974. A special budget for these subsidies was installed outside of the Diet – the special budget for electricity sources (Dengen Tokubetsu Kaikei). The subsidies are distributed by METI and the Ministry of Education (MEXT, before 2002 by the Science and Technology Agency). Since a change in the electricity law in 2002 (the basic

5 Euro figures were calculated using Yen-Euro exchange rates from 2017.

energy policy law), NPOs and other groups can team up with foundations like JAERO or private companies receiving these subsidies as subcontractors (see below).

This financial environment guarantees a steady flow of money to the pro-nuclear campaign. Prior to 2011 'pro-nuclear civil society' groups were much better off financially than their anti-nuclear counterparts (for details on the funding, see Weiss 2019b: 5-13).

Framing of Nuclear Power

Since I have described the framing of nuclear power by the 'pro-nuclear civil society' in detail elsewhere (Weiss 2019a: 188-239, 279-291), I will only give a brief overview here. In general, nuclear power is framed positively by all of the groups. Recurring themes are Japan's reliance on nuclear power and its lack of natural energy sources, its dependence on foreign energy, the safety and high technological level of nuclear power, the need for a stable supply of energy (or a balanced energy mix), the economic benefits of nuclear power, for instance, low electricity prices and the economic gains from exports. The pro-nuclear groups underline that nuclear weapons and nuclear power are completely separate issues. A relatively prominent aspect of their framing is also the claim that nuclear power is a green technology, serving to limit carbon dioxide production. As described above, many of the pro-nuclear groups are based in peripheral regions of Japan, where power plants are located. They argue that the building of nuclear power plants contributes to regional development, and they underline the integration of power plants into the local community emphasizing their contribution to national prosperity through electricity production. Another common thread is the focus on 'educating' the population to overcome 'irrational sentiments' regarding nuclear power.

The groups run by scientists and political elites tend towards a technical and policy-oriented framing. In a newspaper advertisement by the Thinking about the Earth Group, which was organized as a 'national movement to establish love for the earth' before the Tokyo Summit in 2008 (*Sankei Shinbun* 2008) the founder Akito Arima describes the carbon dioxide output in tons by various countries and explains that in the future fossil fuels will run out. He goes on to explain that carbon dioxide emissions are increasing and that new energy sources won't be ready in time to inhibit global warming. Arima then shifts his focus to nuclear power, which he presents as the only chance to fight global warming and prepare for future scarcity of fossil fuels.

Some groups employ more aggressive rhetoric. Members of a gathering called ‘Making Statements about Nuclear Power Group,’ consisting mainly of former nuclear power technicians and managers, for instance, label themselves as ‘worried patriots’ (*ukoku no shi*) and underline that ‘whenever we meet and talk about nuclear power, we express our worries and criticism about Japan’s energy policy, the media, and the present situation.’ They aim to ‘disseminate our right opinion [*tadashii iken*] and our right information [*tadashii jōhō*] based on the common understanding that nuclear power cannot be disregarded in Japanese energy policy.’ They go on to explain that ‘nowadays the enemies of nuclear power are actively making statements in an organized way, and the pro-nuclear group often remains silent’ (GMHK 2006).

In contrast to this rather aggressive framing, women’s groups focus on everyday life and employ a softer language. In the Asuka newsletter (*AEFN* 2001: 1) the chairwoman introduces the group with the following statement:

We are a group of consumption life advisors interested in the energy problem. We conducted study groups and have taken part in [nuclear facility] tours and visits for a couple of years. [...] We realized how important it is to raise one’s voice as a consumer. From our consumption life advisor standpoint, bringing together the three groups of companies, the administration and consumers, we want to participate widely and disseminate information!

After an ‘energy talk salon’ in Japan’s largest power plant location, Kashiwazaki, one member sums up her conclusions (*AEFN* 2002: 2):

Talking with middle school students I felt that they don’t have a sense for saving energy. It is natural for them to have plenty of energy. Even if we use as much of it as we want, there are no problems. [...] It is an adult’s responsibility to learn about the problems of energy and environment, which are at the basis of everyday life.

Another member adds (*AEFN* 2002: 2):

If we think about energy and electricity it is common to think in patterns like pro-nuclear vs anti-nuclear or to assume that saving energy and promoting renewables is equal to saving the environment. But since already 42% of greater Tokyo’s energy supply comes from nuclear power, we cannot let go of nuclear power and only increase energy saving and renewables.

While the language is softer than in the more 'masculine' groups of scientists (presumably due to the mainly male audience), Asuka members make clear that they were surprised to learn that 'not everything in the news is true' and remind journalists to 'stick to the truth.' The newsletter also presents the tour report of a 'wind turbine, which did not move, due to lack of wind' (AEFN 2002: 3). Local people from Kashiwazaki are reported to have asked their counterparts from Tokyo, who were invited for this event, to 'be aware that their energy is produced in Kashiwazaki' and to 'become able to understand nuclear reactors and pluthermal' (Plutonium-Uranium mixed oxide fuel, a measure promoted by the government to reduce the growing stock of Plutonium) (AEFN 2002: 2).

Political Influence

It is difficult to evaluate the pronuclear groups' influence on political decisions because their policy preferences usually do not differ very much from that of its political allies in state agencies. However, the pro-nuclear countermovement also gained a say in policymaking through inclusion in government advisory councils (*shingikai*) and government organizations. Through these vehicles it articulated mainly the interests of its major sponsors, the nuclear industry, but also of the regions benefitting from financial support for hosting nuclear power plants. One of its aims is the preservation and expansion of existing financial resources. Continuing reliance on nuclear power and upholding the major pillars of nuclear power policy, for instance, developing a nuclear fuel cycle, is important for regions heavily engaged in nuclear power production and reprocessing like Aomori and Fukui.

Since the beginning of Japan's nuclear programme in 1954, various parts of society have been involved in the local and national forums of JAIF and the JAEC, the government's highest decision-making body in nuclear policy before 2011, coordinating related agencies and social groups (Yoshioka 2011). With the growth of the countermovement the government created formal posts for 'pro-nuclear civil society representatives,' some of them also equipped with decision-making powers. Since 1998 (when Arima became Minister of Education) a female 'civil society representative' is chosen at the highest level of administration for the Atomic Energy Commission to signify the inclusion of energy consumers into the nuclear power administration. The first such representative was a free TV moderator, featuring in numerous programmes sponsored by the utilities. From 1990 on she was member of the planning board of ETT, and from 1994 advisor to the JPC. She was succeeded by the leader of a pro-nuclear NPO in 2007. In 2010 the leader of Asuka Energy

Forum was chosen as the successor (JAEC n.d.). In 2001, after the end of the nuclear power monitor system, the JAEC established a Subcommittee for Citizen Participation (Shimin Sanka Kondankai) and packed it with representatives of the 'pro-nuclear civil society' (JAEC 2009). Asuka's regular 'private' events in various locations appear to have been conducted parallel to the 'official' public hearings carried out by the JAEC (Asuka Energy Forum, 2002-2012). After 2011 it actually turned out that the NPOs were involved in mobilizing 'citizens' for the JAEC hearings (Weiss 2019b).

The political influence of the pro-nuclear movement can be seen in the Basic Energy Policy Law (Enerugi Seisaku Kihonhō) of 2001, which served to hedge liberalization plans originating within the state bureaucracy. From the 1990s, in the context of a global trend towards liberalization and privatization of public services, bureaucrats within MITI started to question the monopoly of the electricity companies. A partial liberalization was conducted to the effect that businesses were enabled to choose where to buy their electricity, but due to the regional monopolies of the utilities for private customers and their ownership of electricity grids the effects were limited (AS 2014b). To counter further liberalization, LDP politicians close to the energy companies drafted a Basic Energy Policy Law in 2001. It was criticized by opposition parties as 'aiming to cement the use of nuclear power' because the drafting followed defeats of the pro-nuclear coalition in regional non-binding referenda and it decided that 'local communities have a responsibility to cooperate in the siting of nuclear plants' (ESK 2002). The law was also criticized by a private think tank because 'the safety of the energy supply' – essentially meaning the use of nuclear power – was placed above 'the market principle' (AS 2001). It went largely unnoticed in the discussion that there was a paragraph included allowing 'non-profit organizations to take part in public acceptance activities' (ESK 2002). This paragraph served as the basis for a more important role of the 'pro-nuclear civil society.' NPOs and other groups began to act as subcontractors to the JAEC's public hearings, and METI's and MEXT's various social education programmes.

In this way the 'citizen representatives' in the JAEC's and METI's various advisory councils were in a position to argue for increasing the programmes they themselves benefitted from. An NPO leader, for instance, argued to expand a specific nuclear power PR workshop program in a METI advisory council and later happened become subcontractor for the same program with her NPO (Sugimoto 2013a, 2013c). In 2010 the 'pro-nuclear civil society' seemed powerful as never before. NPOs gained large sums for public enlightenment projects such as the search for a nuclear waste disposal site and donations

by the nuclear industry (Sugimoto 2013b). The newly elected Democratic Party (DPJ) decided to increase the share of nuclear power production from about 30 to 50% and public opinion was in favour of nuclear power (Iwai and Shishido 2015).

Changes after the Fukushima Nuclear Accident

The Fukushima nuclear accident in 2011 was not only a major environmental catastrophe, but also a political disaster for the pro-nuclear campaign. During the course of events the countermovement found itself cut off from important decision-making bodies for the first time in history – if only for a short period. In the first months after the accident the DPJ government was occupied by the immediate countermeasures against widespread destruction caused by the Tsunami. Under the DPJ's Minister of Economy, Banri Kaieda, the pro-nuclear movement was able to retain its influence. In early April 2011 METI announced the building of a 'wise men group' (*kenjinkai*) to discuss future energy policy. Akito Arima, a key member of the 'pro-nuclear civil society,' was to head the commission (AS 2011a). In June 2011 the committee's name disappeared from the news. There were rumours in the media about arguments between Prime Minister Naoto Kan and Kaieda. A weekly magazine reported that an agency of METI had prepared the committee to stage a pseudo-discussion and the result (to stick to nuclear power) was already decided (Aera 2011). Kan, however, announced that nuclear power policy would be discussed from the scratch. He was pressured to step down in August 2011 by the LDP and critics within his own party, who threatened to block major policy proposals. However, under Yukio Edano, a top DPJ politician who became Minister of Economy under Kan's successor, a new committee to decide basic energy policy (*Sōgō Enerugī Chōsakai Kihon Mondai Iinkai*) staffed to one-third with experts sceptical towards nuclear power (while the chairman was a staunch supporter) was installed (AS 2011e). During Edano's term the 'pro-nuclear civil society' found itself sidelined by scholars and policymakers oriented towards liberalization. While Edano was in favour of restarting reactors as soon as possible, he took a tough position on Kyushu Electric Power (Kyūden), which had become caught up in a scandal touching the core of the 'pro-nuclear civil society.' Kyūden had called on its own employees as well as employees of its subcontractors to speak out for the restart of nuclear reactors during a public hearing event. Because these smaller companies depend on Kyūden for contracts, there was a high chance that such requests would be fulfilled. During the

event, which was organized by the JPC, many of these mobilized 'citizens' voiced their support for a quick restart. However, the call for mobilization was leaked and became a major scandal. From mid-2011 similar scandals involving other utilities became public. It turned out that METI's organization responsible for nuclear safety and other METI agencies had actually requested the 'pro-nuclear citizens' to turn out at hearings (AS 2011b). As a reaction to Kyūden's lukewarm handling of the incident, METI under Edano blocked a major extension of credit by the Development Bank of Japan to the company (AS 2011d).

In 2012, there was substantial infighting in the DPJ about energy policy. When it became clear that TEPCO was heading towards default due to the costs of the accident and that the government had to step in, the DPJ was supplied with additional leverage over METI and the nuclear industry (Ōshika 2011). The DPJ installed a committee to analyse the financial situation of TEPCO, which criticized the utility's use of monopoly profits for advertising etc. (AS 2011c). As a follow-up, a committee was appointed to check the use of electricity fees in case a utility applied for increasing electricity prices. This was an ad hoc measure to change the practice of the existing framework without a change of law, which would take more time. As a consequence, the utilities' freedom in calculating the 'costs for dissemination and development,' one of the pillars of resource supply for the pro-nuclear movement, was reduced (Komori 2012b).

The JAEC, the policy body with legal decision-making power in nuclear policy and one of the hosts of the 'citizen representatives,' got caught up in another scandal. In May 2012 it became public that it had conducted secret meetings with representatives of the nuclear industry and only the pro-nuclear members of one of its advisory councils (AS 2012e). It also became a target of pressure for reform and the DPJ built an advisory council to come up with proposals for reform. The JAEC was subsequently stripped of the power to decide the basic nuclear energy plans, something that had been decided every three years before.

The DPJ also installed a minister's conference to come up with a new comprehensive energy strategy. It offered three choices for the long-term future of nuclear power: 0, 15, or 20-25%. As part of the policymaking process, deliberative polls on the future energy policy were conducted. They were outsourced to the PR firm Hakuhōdō, which gathered the opinions of citizen via the internet. During the first few meetings it turned out that, again, employees of the nuclear industry were among the citizens stating opinions (they had been picked from the pro-nuclear opinions in the internet). After severe criticism, employees of the nuclear industry were excluded from

appearing as speakers at discussion events and the distribution of speakers was changed from one-third for every option to a bigger share for the 0% option, because the overwhelming majority of internet opinions had favoured it (AS 2012a). The (unintended) results of the poll conducted outside of the framework of the pro-nuclear campaign proved decisive to force the new DPJ leadership into a commitment to nuclear phase-out by 2030 (AS 2012c). While the initial DPJ statement was weakened after protests from Japan's largest business federation in September 2012, the challenge to the 'pro-nuclear civil society' was substantial.

The Pro-nuclear Campaign in the Opposition

During this period former Education Minister Akito Arima gathered his allies from the business, science and media communities and founded yet another group, the Energy Policy Discussion Group (Enerugī Seisaku Kondankai), to make an appeal to Prime Minister Noda in March 2012 (AS 2012b). ETT also had to descend into opposition and leave its headquarters within the JPC to relocate to the private Economic Marketing Centre (Keizai Kōhō Sentā) run by the largest business federation. The relocation appears to have been a reaction to increased media attention to its activities in the wake of the Kyūden scandal. The strongholds of the 'pro-nuclear civil society,' the prefectures and communities hosting a large number of nuclear power plants, were important in influencing the Noda government to back away from drastic changes in nuclear policy. When the Minister of the Economy, Edano, declared that he envisioned zero dependence on nuclear power in the future, while meeting with the governor of Fukui prefecture to discuss the restart of nuclear reactors under new ad hoc safety regulations in 2012, the governor refused to meet him again and forced Prime Minister Noda to publicly commit to nuclear power (MS 2012). When it became public that the government was considering reducing the amount of nuclear fuel processing in a facility built in Aomori, the prefecture's governor announced that the facility's nuclear waste would then be returned to where it came from, forcing the DPJ to abandon its plan (AS 2012f). After the Vice-Minister of the Economy announced that the government was considering stopping the development of the fast-breeding reactor Monju, the governor of Fukui and the mayor of the host community protested and pushed the DPJ government to reverse the decision (AS 2012d).

The pro-nuclear movement was spared more drastic cuts by the second major funding source, the special budget for electricity sources (Dengen Tokubetsu Kaikai). The DPJ had announced a major revision of energy policy,

including a review of the special budget to acquire funds for reconstruction after the Tsunami. Before this could be put to practice, however, it suffered a crushing defeat in the December 2012 lower house election and was almost eradicated as a political force in the subsequent elections. The new LDP government cancelled the revision and the pro-nuclear movement returned to the advisory councils (AS 2013). However, a legacy of the DPJ's changes in energy policy remains. During the creation of the new Nuclear Regulation Authority (NRA) under the umbrella of the Ministry of the Environment (also done in 2012 by a cooperation between the DPJ, the LDP and its later coalition partner, Kōmeitō), members of the 'pro-nuclear civil society' were kept out of influential positions (Koppenborg 2020). The NRA since then has become a major target of protests by 'pro-nuclear civil society' groups (see below).

Framing after 2011

After 2011, the framing of the 'pro-nuclear groups' has become more aggressive. Arima's National Nuclear Conference and other groups regularly criticise various media programmes and newspapers in their newsletters and in 'official statements' (e.g. EMHK 2019). Former Prime Minister Naoto Kan is being depicted by the pro-nuclear campaign as the man who plunged the nuclear administration into chaos, as is his party, the DPJ (Weiss 2019a). The pro-nuclear campaign, in alliance with conservative media and the LDP, was relatively successful in disseminating this framing. The host communities of nuclear power plants arguably also helped to frame the DPJ government as wavering and irresponsible. The next Prime Minister, Abe, was one of the initiators of this narrative. From an early point after the nuclear accident he accused DPJ Prime Minister Kan of interfering in the management of the accident, overestimating his own competence and not listening to experts (Weiss 2019a: 292-294). The *Asahi Shinbun*, a newspaper which had become critical of nuclear power after 3.11, suffered a major defeat when it was accused by parts of the media and the pro-nuclear campaign of misrepresenting TEPCO and the head of the Fukushima 1 nuclear power plant, who was a national hero, according to the pro-nuclear campaigners (Weiss 2019a: 478-489). They also harshly criticize the NRA for 'not functioning properly' because the new safety procedure takes too long in their eyes; they want the NRA to emphasize the safety of nuclear power plants. The pro-nuclear groups' homepages and newsletters also became more active in disseminating information on the negative effects and problems of renewable energy (e.g. NEK n.d.). Multiple groups handed

petitions to the government calling for a full commitment to nuclear power and some have also called for the ending of the limitations put on nuclear PR (GKMK 2015). They paint a very dark picture of the future in case Japan does not spend more effort to restore nuclear power. In reaction to the Fukushima accident, the 'female' groups of the campaign increased their focus on radiation and food safety, but their framing also resonates with the changes towards a more negative framing of the government's policy in the 'male'-oriented groups, while using softer words and less direct accusations, warning, for instance, of 'hasty decisions in energy policy (AEFN 2012).'

A Return to Power?

The LDP government, which was elected in December 2012, proved hesitant to restore the 'pro-nuclear civil society' to full power in energy policy. In METI advisory councils, proponents of liberalization have retained influence and in 2016 the electricity market for consumers was liberalized. This keeps electricity companies under pressure to reduce costs and limits the potential for large-scale PR measures, like before the accident. As a consequence of the accident, METI aims to separate ownership of the electricity grid and electricity production by 2020, a reform, which could potentially further undermine the position of the utilities and their ability to support the 'pro-nuclear civil society.' However, at the same time, the government aims to guarantee the profitability of nuclear power by introducing a financial mechanism for supporting it (AS 2014a).

It is thus unclear, whether the financial basis and political influence of the 'pro-nuclear civil society' will be reduced significantly. Despite the changes in regulation of the electricity prices, regarding the 'output side' – the budgets of the pro-nuclear groups – there is no clear trend. A limited number of new groups and NPOs were actually founded after 2011. Arima again participated in the founding of at least three groups. They, however, appear to be mainly regroupings and fusions of older activities under new names (Weiss 2019b). The budget available for the 'pro-nuclear civil society' suffered some cuts after the accident. TEPCO was forced to significantly decrease its PR budget from about €210 million in 2011 to about €27 million in 2012 (Komori 2012b). Some groups were criticized directly in parts of the media for accepting large amounts of money from the state and the nuclear industry while claiming to be 'neutral citizens.' Some groups showed a tendency towards declining funding from public and corporate sources in the years immediately after the accident. After a few years, however, funding has risen again, while not

completely returning to pre-3.11 levels (Weiss 2019b: 5-13). There were also internal discussions about whether to continue JAERO's funding or not, but it continues operations (Interview Funakoshi 2015).

After the chairwoman of Asuka, who was also a member of JAEC, was severely criticized by newspapers and the DPJ in the Diet for delivering propaganda for money, using her public vehicle for private NPO events, and conflating her public position with her NPO activities, another NPO representative – a radiation researcher – was awarded the 'citizen position' in the JAEC in 2013. The JAEC was stripped of its most important policy competences, which were transferred to METI under Prime Minister Abe, but it retains some functions, for instance, evaluating nuclear policy. In general, the pro-nuclear movement retained power in organizations less affected by scandals and subjected to DPJ reforms. This led to (limited) divisions between different government agencies. A MEXT advisory council created to decide over the future of Japan's fast-breeding reactor in 2016, for instance, was staffed with supporters of the pro-nuclear movement, Akito Arima being the chairman. The NRA had recommended that the ministry change the organization running the current fast breeder Monju (because it considered the current organization not suitable because of past mismanagement). MEXT officials reportedly were worried that the NRA could derail their efforts to continue the development of the nuclear fuel cycle (AS 2015c).

Conclusion

The Japanese nuclear industry, in coordination with state agencies from the 1970s on, has mobilized stakeholders with a direct or indirect interest in nuclear power through monetary and symbolic incentives to form a 'pro-nuclear civil society.' This pattern of building up and supporting a countermovement against groups challenging the hegemony of business and political elites resembles what has happened in the Japanese labour movement. While in terms of policy preferences it is difficult to separate the 'pro-nuclear activists' from their sponsors, the pro-nuclear movement cannot be simply analysed with a dichotomous conceptualization of 'the state' versus civil society. First of all, I would argue that the mobilization of local and professional communities for nuclear power was a key component of the strategy of the nuclear industry and officials to promote nuclear power and check the challenge from the anti-nuclear movement. It is a movement directed by a hegemonic developmental alliance mainly focused

on mobilizing society to accept and support its aims, but parts of civil society took part in the movement and it came to actively employ a ‘civil society rhetoric’ and underline its ‘civicness.’

Interestingly, the campaign was enabled by state subsidies and monopoly profits from a sector of the economy which resisted (neo-)liberalization efforts to a substantial degree. Contrasting Ogawa’s case study (Ogawa, in this volume), because of the movement’s clientelist character, ‘co-optation’ rather than ‘co-production,’ might be the more adequate term to describe its relation to the state and the nuclear industry. The campaign could be seen as a leftover of a fading developmental legacy, but its resilience could also point to a continuing pattern of state-society relations. Some of the ‘volunteer’ programmes and NPOs described in this chapter, for instance, were simply refurbishments from older programmes installed under a developmental regime.

The movement was able to retain or regain its most important resources, namely money and access to political decision-making, via the LDP and parts of the bureaucracy in METI and MEXT. Its very core, the foundations linking the nuclear industry, bureaucracy and local as well as professional communities (for instance, JAERO and JPC), emerged largely untouched from the political turmoil following the Fukushima accident. This alone could be enough to keep the movement alive. Nuclear scientists, host communities of power plants and cadres of the nuclear industry remain active in advocacy and the organization of local communities through ‘social education’ and the distribution of resources. A key resource, however, might have been lost during the accident and the following series of scandals. The legitimacy of the pro-nuclear movement has suffered a great deal. While the pro-nuclear movement succeeded in framing the DPJ and politicians aiming to overhaul nuclear policy as irresponsible and chaotic, public opinion strongly embraced nuclear scepticism after the accident (Iwai and Shishido 2015). While the aspect of legitimacy cannot be dealt with here extensively, a key question concerning the future development of the pro-nuclear movement is: To what extent will it be able to overcome its loss of legitimacy?

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