

# Immunities: Life in a Fukushima World

Adam BROINOWSKI

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The meltdowns at the Fukushima Daiichi Nuclear Power Plant (FNPP1) situated between the towns of Futaba and Ōkuma in Fukushima prefecture since 11 March 2011 have increased the visibility of the power structure that supports them. To examine the interventions of sovereign power, I discuss two selected artistic reflections of the ongoing nuclear disaster: a fiction film titled *Kibō no Kuni* (Land of Hope) (script/direction Sono Shion 2012), and a theatre performance titled *Infant* by Gekidan Kaitaisha (2013). So as to better comprehend myriad aspects of the nuclear disaster, I apply the concept of immunity in three distinct but interlocking applications.

Sovereign power, applied in its generic sense, is the authority of government as the elected representative that is mandated to act in the interests of the people, and which delegates authority through relevant institutional bodies.

Immunity is applied here in three broad forms.

1. A biological immunity of the commons that includes social and ecological forms, and which is related to the radioactive contaminants dispersed from the ruptured Fukushima nuclear power plant.
2. A political and economic form of immunity, which reflects the interests of a transnational 'nuclear village' to minimize as much as possible loss or liability incurred since the beginning of the nuclear disaster.
3. A military form of immunity, which overlaps with the first two, and reflects a strategic logic of national security.

Through a discussion of *Land of Hope* I outline the sorts of issues that confront local communities affected by a nuclear disaster of this kind. I then turn to the methods deployed by the authorities that are responsible for developing a sovereign response to the nuclear disaster at FNPP1, to show how political and economic immunity has been prioritised. I suggest that there has been an attempt to resolve the contradictions between biological and political/economic forms of immunity that have emerged by asserting the necessity of national/military forms of immunity. In the discussion of *Infant* by Gekidan Kaitaisha that follows, I show how the sovereign response to the present nuclear disaster is reflected in an allegory for the return of ordinary or past sovereign violence and in anticipation of violence to the coming future. In conclusion, I suggest that as an

ever-growing debt accumulates to the future under the present system, the sovereign response to the Fukushima nuclear disaster may minimize economic and political losses in the short-term but it will produce significant negative consequences to public health in both the short and longer terms.

### ***Land of Hope***

*Land of Hope* is a subtle and compelling drama that portrays the ambiguous condition of living with radiation contamination after a nuclear disaster in regional Japan. The film tells of the people of Oba who live 20kms from a nuclear power plant which has just exploded after a large earthquake in an imaginary 'Nagashima' prefecture in the Chūgoku region.<sup>1)</sup>

The residents of Oba liken the disaster to a 'war', in the sense that arbitrary divisions are rapidly imposed by security personnel from central command in the distant capital in response to the encroachment of an invisible enemy.

In Oba, a barrier fence is erected which separates the properties of the Ono and Suzuki families. Finding themselves within the area determined as the mandatory evacuation zone, the Suzukis board a departing bus. Their son Mitsuru expresses relief at 'being alive'. Despite being saved from evacuation, the elderly Ono Yasuhiko is far from relieved. He urges the younger Ono couple Yōichi and Izumi to flee as well. He says, "the government is not on your side"; "only the strong run [away], they run because they are strong", and he packs them off with a pile of books on radiation exposure.

Settled in a new town further away from the nuclear plant, Izumi reads Yasuhiko's books as regional television repeats that it is safe to return to life as normal. When Izumi learns that she is



**Figure 1. Izumi goes shopping. *Land of Hope*, 2012.**

pregnant, she takes precautions against the “invisible bullets”. She encloses herself within an indoor bubble of plastic and wears a spacesuit outdoors. She measures all her food purchases with a Geiger counter. Yōichi endures remarks from strangers about his crazy wife and taunts from fellow construction workers who regard Izumi’s behaviour as “insulting”. In turn, Yōichi demands to know why they are “not more worried”.

When the zone is expanded, Yasuhiko and Chieko Ono, who have lived through the Chernobyl nuclear disaster, refuse the evacuation orders. They continue to refuse even when Yōichi visits with the local authorities to try to persuade them to leave. During the meeting, Chieko, who appears to have dementia, repeats a strange conversation with Yasuhiko in which she asks him to “go home”.

Chieko: Lets go home.

Yasuhiko: Where?

Chieko: Home.

Yasuhiko: This is home.

Chieko: Lets go home!

Yasuhiko: Ok, in ten minutes... (*Land of Hope*, 2012).

When Chieko wanders the Oba streets, now filled with abandoned cows and dogs, she seems to think she is 21 at the Oba O-bon (summer festivities). When Yasuhiko finally finds her after a frantic search, he has an epiphany. He proceeds to kill each one of his cows, and then, in agreement with Chieko, set fire to their house that has been passed down from their ancestors with themselves inside it.

Interspersed with this narrative are scenes of the youngest relationship between Mitsuru Shimizu and a young woman named Yōko. As they escape their ‘temporary’ accommodation to roam the frozen wasteland of the mandatory evacuation zone, they meet two ghostly children, who are experts on the Beatles. The children inform them that Japanese people must “take one step at a time”. When they suddenly vanish and cannot be found again, Yōko becomes distraught, having only just lost her own family. At this point, Mitsuru proposes to Yōko.

The relationships in *Land of Hope* represent three broad life-stages – coupledness, child-rearing, retirement. They also present three main options for responding to the danger of radiation exposure:

1. voluntary suicide to preserve an attachment to inherited traditions connected with the house and the land
2. self-protection through self-education and voluntary exile
3. remaining in temporary accommodation near the evacuation zone to take one day at a time.

Limited to dyadic and familial relationships, the film conveys only these options for a public response to the radiological crisis. For those who seek to do other than what is prescribed by the authorities after the disaster, self-removal, whether by self-extinction or emigration, appears to be the only option for escape. Otherwise, as Izumi and Yōichi discover, it seems one must join an

ambivalent majority (like Yōichi's co-workers), and continue to work and live in radiation-affected areas. Whether from ignorance, indifference, fatalism, or from lack of alternatives, *Land of Hope* can be read as depicting how tacit acceptance of the dangers posed by radioactive contamination becomes the social norm. Despite this commendable attempt to portray to a wider audience the difficulties that confront people after such a disaster, other forms of social relations such as community and social organization are ignored. This tends to close down alternative modes of thinking and responding to a nuclear disaster, such as community and social mobilisation for cooperation, sharing of resources such as education, cleaner food and water, relatively independent and collective decision-making based on immediate and direct needs, and life options for resettlement.

But one moment in *Land of Hope*, makes a subtle allusion to a legacy of struggle between local community and central authority in the history of industrialisation since the Meiji period. (Ui 1992; Yokoyama M. in Pontell, H. and G. Geis, 2007: 327-346; Funabashi H. in J. Broadbent and V. Brockman (eds.) 2011: 37-61.<sup>2)</sup> By removing the sound and printing the lyrics onto the frames, the filmmakers place a stress on the scene of Chieko dancing the *Tankō bushi* (miner's dance) during her imaginary O-bon foray. This emphasis informs and re-connects the presentism and amnesia of the disaster with an internal colonial history of exploitation, expropriation of resources and pollution experienced by both local and 'foreign' miners and villagers in the territorial peripheries.



Figure 2. Mitsuru and Yōko ride down a rural road. *Land of Hope*, 2012.

Similarly, in the opening scene to *Land of Hope*, we see Mitsuru and Yōko ride on a motorbike along a road dwarfed by gargantuan poles that carry electricity to the city. It seems that the couple

reflect a proto-proletarianised population who exist in a buffer zone that absorbs the violence of capital accumulation. As many nuclear power plants are sited, constructed and operated in remote and economically vulnerable coastal towns of Tōhoku (Kōta in Hindmarsh 2013: 41-56; Hindmarsh in Hindmarsh 2013: 57-77), even if they receive economic incentives to continue to host these plants, such villages have been and continue to be subjected and exposed to a spatial logic of semi-colonial control by centralized power upon which they have become heavily dependent. (Vlastos 1998: 65-6; Kainuma 2011; Takahashi 2012).

It has long been known (although this knowledge has been marginalised and so deserves reiterating) that nuclear reactors, even in their standard operation, release aerosolised radiation into the surrounding environment during 'venting' procedures in the exchange of fuel rods. These effluents and hot particles affect the health of living organisms, causing higher incidences of unusual types of cancer and radiation-related illnesses when they are ingested or inhaled and incorporated within the body tissues, organs and bone. While these emissions from nuclear reactors continue to be approved by regulators, as discussed further below the levels of radiation have been routinely regarded as too low to be significant and their causal links to negative health effects on local inhabitants have been generally suppressed or denied.

In the event of a nuclear disaster such as at Fukushima Daiichi, it becomes even clearer how the immunity of exposed communities who continue to live in spoiled peripheries and even in the centres is weakened in exchange for strengthening sovereign power. With more than eighty years of prior knowledge of the cytotoxic and mutagenic health effects from nuclear reactor emissions, both in standard operation and in meltdown conditions (Sternglass 1969: 26-8; Graeub 1992; Freeman 1982: 76-81; Bertell 1985; Caldicott 2006: 46-8; Fairlie, 2013), responsibility for the (foreseeable) malfunction of the Fukushima Daiichi NPP (GOJ 2012: 16-17, 19), and the negative effects of its dispersal of radioactive contaminants can be said to lie with those who should have given greater priority to this knowledge and who have nevertheless worked to trivialise and conceal it from the public both prior to and after the Fukushima disaster. This brings us to the second immunity, the political and economic.

### **Sovereign responses to the Fukushima nuclear disaster**

The Hobbesian conception of sovereign power in the formation of the model for the modern state in the 17<sup>th</sup> century has been understood by Michel Foucault as the legal right vested by its subjects in the sovereign as the interpreter of a God-like will to "kill and let live". (Foucault 1990: 135-36, 178). Aligned with this, in Agamben's reading of Carl Schmitt's *Political Theology* (1922) and Walter Benjamin's *Critique of Violence* (1921) which analyse the links between the modern state and war in the aftermath of the First World War (Agamben 2005: 52-64; Foucault 2004: 95-6), the sovereign assumed a legal right to carry out this will under a "state of exception" in which special laws permit sovereign intervention, or a legal suspension which purportedly allows for extra-

judicial intervention in exceptional circumstances. This includes the capacity to determine a state of emergency in which a population can be sacrificed for the national interest. In such a situation, a problem arises when the elected government exercises its sovereign right as representative of the people in the pursuit of interests that contradict the will and interests of the people.

The Fukushima nuclear crisis is a good example of this problem, as it has also exposed the nature and priorities of contemporary sovereign power in Japan. The influence of the 'nuclear village' (*genshiryoku mura*) extends across many sectors of government (including regulatory agencies), corporate utilities and manufacturers, knowledge institutes and media outlets. (Hara in Hindmarsh, 2013: 22-40; Samuels, 1987: 237-8). As was demonstrated in the responses by industry immediately following the disaster at Fukushima, foreign states and corporate bodies also share a stake in Japan's nuclear energy industry (such as the US Department of Energy, and the corporate combines of Tōshiba-Westinghouse, Hitachi-General Electric, and Areva-Mitsubishi). (Edwards, 1 July 2011).

When the Abe government, against majority public opinion (*Asahi*, 18 March 2014),<sup>3)</sup> reversed the plan of the Noda government to phase-out nuclear power by 2030, and aggressively pushed for re-starts of Japan's 48 viable nuclear reactors and nuclear technology exports as part of its Basic Energy Plan, it was clear that it was acting in the interests of the powerful nuclear industry and its transnational backers. Despite the Kan administration announcement of its intention to stop domestic nuclear energy production, however, even the Kan and Noda (DPJ) administrations continued promoting the export of nuclear technology after 3/11 (*Asahi Shinbun*, 2 December 2013). Further, a governmental agreement signed in April 2011 between Japan and the US saw the US agree to overlook irradiated Japanese food imports in return for the Japanese government continuing with plans to continue and develop their nuclear industry. (Dupre, 11 August 2011). This eagerness for Japan to continue with its nuclear program was reiterated by John Hamre, the director of the Centre for Strategic and International Studies in Washington, in response to the announcement of the nuclear phase-out plan by the Noda government in September 2012. Hamre said Japan's economic prosperity and the 'global security system' in its current configuration were at stake should Japan renounce its nuclear power program. (Kitazume, 3 November 2012). Ultimately the effort to shore-up and consolidate the 'village' despite the disaster and the magnitude of the risks the nuclear industry has continued to pose has demonstrated the weight of its influence.

Although a significant portion of the population continues to be endangered by the Fukushima Daiichi nuclear disaster which is ongoing as the location of the corium of each of the Units 1, 2 and 3 have yet to be officially identified at the time of writing, the Abe government has claimed its decisions are based on prioritising the protection of the 'national interest'. This has primarily meant bolstering the economy through his 'three arrows plan' – fiscal stimulus, monetary easing, and structural reform of the economy – part of which includes the restarts of the remaining 48 nuclear reactors.<sup>4)</sup> Although the government, apart from a few notable exceptions, has not resorted to

physical force to quell the considerable dissent that has been voiced to these proposed measures, this does not mean that its methods and the consequences of sovereign intervention have not been violent.

After the initial disaster, the Japanese government intervened to cover the immediate costs stemming from the plant explosions so as to keep TEPCO afloat as a functioning corporate utility, and to protect investors' confidence in TEPCO, nuclear power-related and construction industries and 'Japan's brand' more generally. The 'drag-factors' that could inhibit the process of capital accumulation were identified, and control was ensured over the profitability of electricity production for the industry's utilities, major share-holders, financiers and political representatives.

On the other hand, the government has adopted a minimalist approach to compensating damages from loss of land and livelihood and resettlement costs away from areas contaminated with radioactive materials. With the regulatory instruments of a control society at its disposal, 'zones of undecideability' (Agamben 2005: 2) were staked out with a maximum 30 km mandatory evacuation zone. Over time, with attempts to 'remediate' contaminated areas, the terminology has been altered to reflect their new status. At the time of writing, evacuated areas are divided into three categories: areas where evacuation orders are to be lifted; areas where brief visits by former residents are permitted; areas where it is unlikely residents will be able to return. (GOJ, Reconstruction Agency, 2013).

While problems of incompetence and lack of sufficient urgency on the part of the government and TEPCO hampered the evacuation process, instead of planning for resettlement, the official objective has always been to return evacuees to these zones. A systematic program to adjust official radiation limits and to underestimate the dangers to health has facilitated and expedited this return. Since April 2011 the health and safety limits for annual radiation exposures were revised upward by 20 times (from 1 to 20 mSv/y) for civilians, 5 times for workers (from 20 to 100 mSv/y) and 2.5 times for emergency workers (100mSv to 250mSv/y).<sup>5)</sup> Even though a caveat was provided whereby the decontamination program would seek to reduce limits to as close to 1mSv/y where possible, there remains the legal window to permit return to areas that may still have readings of up to 20 mSv/y. By comparison, the mandatory evacuation limit during the Chernobyl nuclear disaster was 5 mSv/y and voluntary evacuation with assistance was 1 mSv/y and over. Although some officials such as Diet member Arai Hiroyuki have recognised the Soviet laws passed for the Chernobyl accident as a model to follow (*Ria Novosti*, 23 September 2014), such as recognising permanent resettlement and the 1 mSv/y limit, Japan continues to maintain safety laws which are lax.

As a consequence, former residents have been left in varying degrees of limbo about the degree of their personal radiation exposures, the habitability of their former areas of residence and its market value and the degree of compensation they would likely receive for their accumulated losses. Instead of the government calculating the worth of their land prior to the disaster and purchasing it from them, residents on the whole have been left to calculate the value themselves

and to decide between permanent evacuation and reclaiming their land. Many are still making mortgage repayments on land for which the re-sale value is drastically reduced. Former land owners from Ōkuma and Futaba in particular may be given between half and seventy percent of the original purchase price of their land in return for their land being used for storage of contaminated waste. (NHK, 30 September 2014).

Cost-cutting methods have been widespread in the processes of 'decontamination and remediation'. In an excessively complicated sub-contracting system, workers have been brought in to work on contaminated sites. These employees have included evacuees, the homeless, long-term unemployed, debilitated people, the elderly and foreign migrants. (Saito and Slodkowski, 2013). For these populations of workers and former residents, the process for making personal health claims to the government has been made so lengthy and complex that many have been discouraged from trying to lodge a claim. It is likely that 'foreign' workers will not be able to make claims at all. (*Japan Times*, 18 July 2014). TEPCO also admitted that there were roughly 2,000 workers (likely 1,973) who received doses greater than 100 mSv/y to their thyroid, and not 178 as previously reported to the WHO. (*Tepeco*, 12 July 2012; Mochizuki 20 July 2013). The actual health conditions and exact numbers of affected workers remains to be fully revealed.

The government and TEPCO have sought further cost-minimization in the systemic re-distribution in the form of regular and continued leakage of radioactive pollutants from the stricken plant into the ocean since the beginning of the disaster. After a series of failures of a French-designed ALPS system (among others) to properly 'decontaminate' the water of radionuclides, since 22 July 2013 TEPCO announced an increase of volume in these releases and since 1 June 2014 dumping continued with the approval of the fishery cooperative in Fukushima prefecture on the provision that a third party would ensure that the water had been decontaminated to safe levels. (*Asahi*, 9 January 2014).<sup>6)</sup> But in January 2014, TEPCO had already admitted that it had miscalculated the amount of Strontium 90 emitted from the groundwater surrounding the plant and released figures much higher than those reported previously. In February 2014, TEPCO acknowledged that radionuclides were being introduced to the ground water that can transport for long distances beneath the ocean floor before entering the ocean and damaging sea life. (Charette, 24 February 2014; Yamaguchi, 3 September 2014). And in September 2014, it was found that concentrations of Strontium 90 in ground water at the plant and just 30 metres from the ocean were the highest yet, and were 25,000 times the rate detected from the same site in January 2014. (*Tepeco*, 18 September 2014). This belated transparency ignored the fact that ocean releases of radionuclides have been ongoing since the Fukushima Daiichi disaster began.

By April 2014 TEPCO declared that it did not intend to analyse alpha emitters (such as plutonium and uranium materials) before dumping. (*Tepeco*, 4 April 2014). As tank storage has grown scarce, leaks continued unrepaired and the constant flow of underground water remains undiverted, increasing amounts of water contaminated with Strontium (Sr 90), Cesium (Cs 137, Cs 134), Iodine (I 131) and Tritium (<sup>3</sup>H), only a small part of the total inventory of radionuclides

(others include a range of other isotopes including actinides/alpha emitters (4 or 5 isotopes of Plutonium, 3 of Uranium, and also Americium and Curium), have been and continue to be knowingly released into the ocean as if this was the only option. (Repussard, May 15, 2014).<sup>7)</sup>

In addition, an extensive program of transport, recycling and incineration of radioactive waste matter (*hōsha-sei haikibutsu*) through designated areas including Tokyo and Osaka has dispersed radioactive contaminant in varying degrees all over terrestrial Japan. Decontamination practices, while reducing radiation levels in specific residential areas, are ineffective as radioactive matter tends to re-circulate in the environment when liberated through incineration or in natural transport systems. Until the corium can be contained, this active release, removal and incineration of radioactive materials will likely continue to contaminate food and water through bioaccumulation and biomagnification in the food chain.

Terminology and the processes of 'decontamination and remediation', tendered by government authorities to corporate contractors, have created a false impression in affected communities of an imminent return to normal conditions. They have also, particularly in the case of incineration, served to remove 'control' areas that may have been used to compare the effects in contaminated areas with those in non-contaminated areas by raising the 'background radiation level'. Overall, this 'recovery' oriented strategy has delayed the decision to employ costly but possible measures to physically contain the ongoing radiation releases from Fukushima Daiichi NPP, permanently resettle affected populations elsewhere, redeem the full costs of doing so and for any adverse health effects from their exposures suffered thus far or in the future through adequate compensation.

This policy of active 'sharing' of nuclear waste into the air, land and waters and the ocean appears to be based on a dispersal and dilution principle. While this would appear to be rational enough, properly funded widespread scientific studies on health effects and effects on the biosphere (including the ocean) have not transpired. Instead there has been a consistent policy of under-monitoring and under-estimating the health effects from the dispersal of such materials on the one hand, and the capture and control of public discourse around radiation effects on the other, apparently so as to 'minimize public anxiety'. Given that mandatory evacuation was stipulated at 5mSv/y in areas affected by the Chernobyl disaster, this approach that permits continued residency up to 20mSv/y is both highly problematic and unprecedented.

One of the clearest examples of a high-level misinformation campaign was when, on 7 September 2012, Prime Minister Abe declared in support of Japan's successful International Olympics Committee bid in Buenos Aires that the Fukushima Daiichi nuclear power plant was "under control". (*Asahi TV*, 7 September 2013; *Mainichi Shinbun*, 8 September 2013).<sup>8)</sup> Had Abe's statement been framed as an address to corporate and state executives who were concerned about investing in the future of Japan's nuclear industry, his statement may have borne some truth. Japan's successful bid to host the 2020 Olympic Games proved an ideal forum upon which to publicly deflect attention and downplay investors' concerns with regard to the realities and implications of

the nuclear disaster. As part of a campaign to reinforce an official safety myth around nuclear power and radiation effects, the international-scale celebration of the Olympic Games are an important fulcrum with which to forge social consensus through national cohesion toward a common goal. At the same time, the head of the Olympic committee former Prime Minister Mori Yoshirō, stated that nuclear electricity generation in particular was mandatory for its construction. (*Yomiuri*, 18 January 2014).<sup>9)</sup>

Another method of sovereign intervention in this campaign has been to mobilise specialist knowledge to insinuate 'neutral' solutions into public discourse, particularly with regard to health concerns. Together with techno-scientific manipulation (flexible safety standards, inaccurate or inactive dosimetry), a program has been implemented to capture all medical data on related health conditions in a central repository, and to classify it so as to regulate its dissemination. The main government survey on thyroid cancers in children (Fukushima Health (Management) Survey) conducted by the Fukushima Medical University (FMU), for example, found that definitive or suspected diagnoses of thyroid cancer in 370,000 children aged 18 or under (at the time of the accident) who have been tested since March 2011 increased over the following two years, from 44 in June 2013, to 59 in December 2013, to 75 in March 2014, to 89 in June 2014, to 104 in August 2014, to 117 (87 confirmed) in February 2015. (Nose and Oiwa, 13 November 2013; Mayor, 14 March 2014; Mayor, 14 August 2014; Oiwa, 24 August 2014). Of the 51 who underwent surgery as of 31 March 2014, an undisclosed number of thyroid patients had additionally developed cancer cells in their lymph nodes and lungs (metastasis). (*47 News*, 11 June 2014).

Suzuki Shin'ichi, an FMU professor and co-leader of the Survey, however, claimed there was no correlation between the results and radiation from the nuclear disaster because, from studies after Chernobyl and Hiroshima-Nagasaki, symptoms were reported to have appeared only after five years. Despite the fact that many positive results of radiation-related chronic and terminal illnesses are known to have emerged before the 5 year mark in both prior radiological events, the co-leader of the Fukushima Health Survey Yamashita Shun'ichi declared that no excess occurrence was expected in the first three years. (Yasumura et al 2012). Ironically, it was the same Dr Yamashita who had edited a 1998 study in which he found 'high growth rate and short latency' in thyroid patients in Chernobyl. (Yamashita et al 1998: 204). In fact, the shortest latency period for both benign and malignant tumors was a case of 1 year and the longest period were cases of 69 and 58 years (Kikuchi 2004).

The Okayama University epidemiologist Tsuda Toshihide, among others, also found the positive responses in those tested to be abnormally high as compared to the national cancer registry statistics from 1977 to 2008. Due to the scarcity of data collected after the nuclear disaster, Tsuda has argued for epidemiological studies on people both within and outside Fukushima prefecture to properly diagnose illnesses and to act accordingly. He urged swift action instead of continuing to debate 'dose assessments which delay action to prevent the damage from worsening.' (*Tokyo Shinbun*, 22 July 2014; GOJ, 16 July 2014). Instead, the Cabinet Office Working Group on

Risk Management of Low-Dose Radiation Exposure and the Ministry of Environment concluded that ‘... increased risk of cancer from low-dose radiation exposures at 100 mSv/y or less is so small as to be concealed by carcinogenic effects from other factors, making verification of any clear cancer risk from radiation exceedingly challenging.’ (GOJ, Cabinet Office, 22 December 2011).

Similarly, the local medical physician, Mita Shigeru moved from Kodaira in Tokyo to Okayama in March 2014. Before he left, he published a statement in a professional newsletter read by his colleagues in which he stated that Eastern Japan and Metropolitan Tokyo are contaminated, and radiation in Tokyo had increased since 3.11; contamination had worsened from contaminated runoff draining into Tokyo bay (and incineration of irradiated waste). Dr Mita stated that he had found unfamiliar symptoms in over 2000 patients from Tokyo and elsewhere, which include: white blood cell decrease, especially neutrophils, in children from mid-2013, nosebleeds, hair loss, fatigue, subcutaneous bleeding, visible urinary hemorrhage, skin inflammations; increase in contagious diseases such as influenza, hand-foot-and-mouth disease and shingles; persistent asthma, rheumatic polymyalgia and sinusitis, and lethargy (i.e. middle-aged and older patients in Tokyo – ‘difficulty turning over,’ ‘inability to dress and undress,’ ‘inability to stand up’). (Mita, 16 July 2014).

Given the wealth of research completed from 20 years of studies in Russia, Belarus and Ukraine of the Chernobyl disaster which from Chernobyl which show serious depopulation and state decline confronting second and third generations, this situation would seem to indicate the need/imperative for a different approach to the one currently adopted by the federal, prefectural, and city governments in Tokyo and the Tōhoku region.

Given the certainty with which the co-leaders of the FMU Survey have ruled out radiation exposures as the cause of unusual numbers of thyroid cancers in young people in the area, even prior to the conclusion of the study, it seems that an official position had already been reached. Contrary to standard medical practice, the Fukushima Health Survey leaders also instructed doctors not to do secondary examinations on those found with abnormal nodules or cysts on their thyroids. (*Fukushima Voice*, 4 May 2012). In this effort to control the public dissemination of information, limit data collection and minimize government liability, agreements have been signed by the IAEA, the ICRP and FMU, and the Fukui Prefectural Government to the effect that each party may request the classification of information that it deems likely to worsen public anxiety. (*Tokyo Shinbun*, 31 December 2013). This position has been supported in legislation, through the Cancer Registration Law (*Gan Tōroku Hō*), passed together with the Secrets Law on 6 December 2013 (*Tokutei Himitsu Hogo Hō*) which came into effect in December 2014. This requires the registration of all cancer-related data collected by medical physicians and hospitals within the national cancer registry. Any leak of this data is punishable with up to two years imprisonment or a fine of one million yen, and could lead to professional discreditation. (*Huffington Post*, 6 December 2013).

In addition, a ‘side-effect’ of the sole focus on thyroid cancers in the Survey has been to ignore

or marginalise other symptoms, illnesses and deaths that are likely to be related to radiation exposures that have occurred over the last three years. There are reports, for example, of increases in the numbers of deaths (roughly estimated at 800) of (often unregistered) workers on and off site at the Fukushima nuclear power plant as well as of citizens from unusual illnesses further afield. (*NSNBC International*, 21 March 2014; *Itagaki Eiken*, 1 May 2012).<sup>10</sup> Only one such case was revealed recently by TEPCO when a male Fukushima subcontractor worker suddenly fell ill and was sent to Iwaki Kyōritsu Hospital by air ambulance. Details of his age and disease were not given for ‘privacy’ reasons. (Mochizuki, 6 September 2014). This is likely to become standard procedure as more illnesses and deaths are exposed.

Also, contrary to the official campaign message of “no immediate health effects”, drops in the numbers of births and spikes in spontaneous abortions that were recorded in December 2011, for example, were not officially included as deaths as such because the babies had not been born. (Körblein, 2013). Körblein also found a rise in infant mortality. Stress, both physical and mental, has also led to a rise in suicides in evacuee and remainder communities.

From decades of research into radiation effects (including radiation releases during nuclear tests in the Pacific Ocean in the 1950s), it is known but not widely enough that anthropogenic ionizing radioactive particles are misrecognised and absorbed by the molecular systems in living organisms and can distort cellular structures and affect functioning, including in the immune system. Although the exact causation at the atomic level of various illnesses remains notoriously difficult to prove beyond doubt (often taken advantage of in pro-nuclear power discourse), scientists and government officials have long known of the negative health effects from exposure to long term low doses of internalized radiation. They have known that incorporation of these materials in the body causes genomic instability and can continue in subsequent generations. Individuals will experience chronically weakened immune systems, accelerated ageing, non-cancerous illnesses, and the production of cancers including leukaemia, fertility problems, congenital malformations and early mortality. (Bertell 1985: 15-63; Monceau et. al. 2013; Gofman 1997; Yablokov and Koltzov, 2013).

Since March 2011, such exposures to radioactive pollution have demonstrated the real violence from sovereign interventions to protect the economic and political immunity of the transnational nuclear village. Shifting the burden of proof for negative health effects from radiation exposure and their causal responsibility (such as for chronic illness and resulting health management costs) from the government and TEPCO to the exposed civilians and workers threatens the biological immunity of exposed populations. Given the long-lived nature of some of these radionuclides dispersed in highly populated areas and their mobility in the biosphere and the food chain, a sizeable population of deleteriously affected could eventuate.

Concretising the practices of capital accumulation amid the nuclear disaster has been the key to producing such conditions. Priority has been given to ‘creative’ forms of wealth generation through knowledge production from scientific data sets, techno-managerial skills in

decommissioning and remediation programs, promotional campaigns for tourism and local industry, emphasising the recovery of traditional and customary cultural practices, and renewed energy schemes for the affected areas. This has been overlaid by a concerted discursive program of resilience, unity and recovery as qualities particular to the Japanese people and their lived experiences of large-scale natural and man-made disasters.

The difference with this particular disaster is the continuous release of man-made long-lived radio-isotopes. The site at the Fukushima Daiichi NPP continues to be highly vulnerable to the possibility of re-criticality due to non-containment of the melted nuclear fuel, seismic movement and soil liquefaction, operational human error and 'extreme weather events'. Along with active dumping of radioactive water into the Pacific Ocean, the site remains highly porous and continues to leak radiation-contaminated waste into the air and into ground water. This extends the seriousness of the problem posed by radioactive dumping to areas far beyond sovereign borders, and places doubt over the right to make such decisions. Despite this fact, the nuclear disaster at Fukushima Daiichi continues to be categorised as a predominantly national concern under the jurisdiction of the Japanese government.

As if to re-suture the increasingly apparent contradictions between sovereign priorities and biological immunity since 11 March 2011, the Abe government has intensified its campaign pertaining to national ambitions. Often overlooked in analyses of the nuclear disaster, which tend to focus on improving disaster response, managerial, communication and engineering systems, the additional dimension of 'national security' or military immunity, has also played an important role in informing sovereign interventions in the nuclear disaster at Fukushima Daiichi.

### **National Immunity**

In the logic of national immunity, which seeks to maintain the integrity of the territorial boundary as central to modern state sovereignty, institutions, citizens, properties and goods are perceived as the life-blood and organs of the national body. It follows that the defence or protection of this apparently organic whole as defined by these borders and things is a 'natural' function. (Cohen 2009: 19-22).<sup>12)</sup> When the survival of this national organic body is deemed to be under threat, the sacrifice of portions of the body is considered as a legitimate and necessary response for the benefit of the greater whole. (Protevi 2001: 101-2).

To take such measures, special organisation is required. This may include internal security in the preparation for the conditions of a garrison state, in which the jurisdiction over state secrets are expanded, military spending is boosted, energy stockpiles are increased and control over public broadcasting is intensified. As nationalist discourse intensifies and occupies more public space, the sacrifice of oneself for the nation becomes integral to being a model citizen, and may even be inculcated as some rarefied object of desire in public consciousness. Nations are not organic bodies, however, and the rationale underlying such preparations is more than likely not to be for



**Figure 3. JAXA information gathering satellite HIIB No.2, 13 December 2011. AFP.**

the actual survival of the national population.

With the disintegration of the Soviet Union in 1991, increased concern was expressed in security circles in Japan that a potential draw-down of US military presence in East Asia could make an extended US nuclear deterrent less credible.

In a period of renewed nationalism in this post Cold War period, which has included semi-official group and individual visits to Yasukuni shrine, Constitutional and historical revisionism (including high school text books), renewed and expanded territorial claims, and military 'normalisation', there was also a reconsideration of nuclear weapons as part of re-structuring Japan's defence policy and a new wave of increased military spending. In continuation of this approach after 3.11, several high-level politicians, including the former Defence Minister Morimoto Satoshi and LDP Secretary General Ishiba Shigeru, re-asserted in the face of public opposition that Japan's commercial nuclear program, plutonium stockpiles and nuclear plant re-starts could be regarded as a "tacit nuclear deterrent" in the eyes of other nations. (*Yomiuri*, 18 January 2014; *Japan Times*, 6 September 2012; Kageyama, 31 July 2012; Dawson, 28 October 2011). There is also support for this position in the DJP.

Amid the public debate over nuclear energy production in Japan, this logic attached commercial nuclear energy generation to national security.

The Japanese government considered procuring tactical nuclear weapons in its various stages of re-militarization over the decades as early as 1957 when Abe's grandfather and then Prime Minister Kishi Nobusuke raised it for debate in the Diet. Although a signatory to the Nuclear Non-Proliferation Treaty (NPT), Japan has accumulated the fourth largest stockpile of 'civilian' plutonium, and possesses the largest stockpile of any non-nuclear weapons state. (Pomper and

Toki, 2013). It claims that its refusal to give up its significant nuclear reprocessing and fuel fabrication program is based on the aim to achieve 'energy autonomy' by 'closing the nuclear fuel cycle'. This is based upon the ability to separate plutonium from spent fuel and reprocess and fabricate it into more plutonium than is consumed, thereby facilitating an endless loop of fuel production and consumption. In this scenario, spent nuclear fuel is treated as an 'asset' rather than a 'debt'.

While it is not beyond the capacity of technicians in Japan to separate, reprocess and fabricate spent fuel 'upward', this ability should not be understood as solely for the reduction of reliance on foreign fuel imports or even of nuclear waste. After March 2011, the Cabinet Office's Japan Atomic Energy Commission advised, that direct disposal of spent nuclear fuel would be cheaper (and safer) than fuel pool storage and reprocessing. Alternatively, the Science Council of Japan and other expert organizations advocated dry-cask storage of spent nuclear fuel on the ground for a limited time could avoid the dangers posed by fuel pool storage. (*Asahi*, 19 September 2014). Dry-cask storage and disposal would rule out the nuclear fuel reprocessing option, for which there has been significant preparation and investment.

On the other hand, this concept of 'energy autonomy' would not only reduce high costs of importing foreign fuels, it would reduce Japan's vulnerability to possible foreign sanctions on energy resources supplies (uranium, oil, natural gas) should it decide to leave the NPT and 'go nuclear'.

Over the last two decades, together with the overall shift in US military posture toward missile and satellite weapons (the US Missile Defense (MD) program was restarted in 2003 since its moratorium in 1972), the Japan Self-Defense Force (JSDF) collaborated in joint research into Anti-Ballistic Missile Systems (ABMS). (Dawson, 9 December 2012; Jimbo in Thompson and Self, 2002; Gurtov 2014). This System functions as a multi-layered 'fence' of SMIII and PAC-3 missiles for missile interception from mobile and stationary launch platforms, and is built to be interoperable with US military operations. This technology closely ties JSDF operations to a larger and broader US 'global missile shield' and US 'global nuclear strike force' (which includes Aegis-class destroyers, super-stealth nuclear bombers, and satellite and space weapons).<sup>11)</sup>

With the founding of the National Security Council in December 2013 and a sharp increase in military spending and a lift of the ban on the export of Japanese manufactured weapons, the Abe government followed up by unveiling its intention to 'upgrade' to 'pro-active' military status with the US (on par with Britain). (UPI, 18 December 2013). On 1 July 2014, the Abe government then gained approval in the Diet to alter the Constitution to permit it to conduct 'collective security' operations with the United States and other allies, which would include pre-emptive and retaliatory strikes across a range of platforms (F-35 planes, new aircraft carriers and submarines, and satellites).

Despite its stated aims for an unequivocal 'self-defense military', Abe's collective security shift is also to permit the use of force, in collaboration with allies beyond the defence of the homeland.

This includes Japan's ABMS, which is designed to 'neutralize' enemy nuclear weapons either early in flight or prior to launch. In this regard, Japan's collective security is not defensive, but 'offensive'. Should Japan decide to 'nuclearize', high-enough grades of plutonium (or enriched uranium) would be required for deployment on deliverable missile warheads. For this purpose, the maintenance of an independent nuclear reprocessing facility to fabricate high-grade fissile material would be essential (less than 7 percent Pu 240).

Whether Japan constructed its own tactical nuclear missiles, 'shared' them with the US, or continued to rely on the US nuclear umbrella as a 'proxy nuclear weapons state', the intimacy of Japan-US military operations arguably still contravenes the NPT obligations of both nations to eliminate nuclear weapons (Article I as per the US) and to forgo the acquisition of nuclear weapons (Article II). In addition, together with the threat of the nuclearization of the region, some of the implications of these developments are that the US (with Japan) could seek to assert 'nuclear primacy' and force compliance to its will, further undermining international stability. (Lieber and Press, 2006: 42-54)

It is known, however, that the results of a nuclear exchange between nuclear weapons states in the form of a radiological plume and potential famine and mass poisoning from the fallout would be so catastrophic as to undermine the very economic and national security aspects such weapons are said to defend. (Helfland 2013). In addition, the numbers of civilians killed in such an exchange would be disproportionate and unjustifiable. Whichever strategic calculus is deployed, the use of such weapons is both unconscionable and impractical. In this way, nuclear weapons and their operational architecture, including their fuel production systems, contradict the claim that they are to immunize the people of the nation against harm. Through their use, or even posing a credible threat to use nuclear weapons, the sovereign state transgresses its obligations to represent the core interests of the citizenry.

When the commitment of enormous resources and lengthy time-scales to develop these military capabilities is compared to the sovereign response to the public health crisis posed by radiological contamination from the Fukushima Daiichi nuclear disaster, we are confronted by a clear contradiction between biological immunity of the nation's affected citizens (and others) and political, economic and military immunities associated with the continuation of nuclear power in Japan. Due to the particularly prolonged presence and dangers posed by uncontained radioactive materials circulating in the biosphere, the nuclear disaster at Fukushima Daiichi also exposed an increasingly pre-determined future of our own making. This brings us to a theatrical reflection on the Fukushima nuclear disaster that shares and brings together some of the themes discussed so far.

### ***Infant***

A live performance entitled *Infant* (2013) produced by Gekidan Kaitaisha was typical of the group's work to date. Kaitaisha are known for their independent studio works that use an eclectic array of poetic devices to loosely connect interpretations of socio-historical issues through the human body. In the context of 3.11, as an umbrella term for the earthquakes and tremors which also repeatedly shook Tokyo, the tsunami and the nuclear disaster, *Infant* like *Land of Hope*, allegorically referred to war, colonial Japanese history, and forms of illness.

*Infant* began and ended with a young woman and man in present-day Tokyo whose non-verbal repetitive movements suggested some sort of neural disruption. Throughout the performance they witnessed a stream of visitors who seemed to be set in a mode of remembering, forgetting or both, and in a way which was somewhat detached from the present. These scenes were interspersed with recordings of public announcements of the names of misplaced or lost individuals and family members over loud speakers, radio and television during the days and weeks of crisis following the earthquakes and tsunami of 11 March 2011.

In the first scene an actress in a kimono who has dementia is led and gently laid down in a pale blue light presumably by a male intern in a hospice. In a reverie she remembers some lines of Hecuba's from Euripides' *Trojan Women* in which she mourns her sons with tears and offerings of her hair before being dragged away by Odysseus during the Trojan War.

Trojan women, why do you think life is eternal? I am lying down/ wash me/ wash my nails/ my wrinkles/ I can see myself lying down/ listen to my death cry. Die, die, we will die. (Euripides, 1974).

In another scene, the last public speech by the late Hijikata Tatsumi (1928–1986), co-founder of *Butoh*, was replayed on a telemonitor. In it he remembers his childhood home of Akita in Tōhoku



**Figure 4. Hijikata Tatsumi in *Infant*, Gekidan Kaitaisha, 2013.**

as a staple supplier of soldiers, geisha, rice and horses for the aims of the central government. He then recalls nearly drowning as a child in a rushing river swollen with melted winter snow. His rescue from this riverbed where he had been held under by a whirlpool he reinterprets as death and re-birth, which he also states is one of the core principles of *Butoh* which the dancer must constantly undergo. (Hijikata 1985).

Hijikata's elliptical tale combined the structural violence of capital accumulation by the state in the broader projection of national interests, with a formative personal experience that informed his *Butoh* practice. His metaphor of the whirlpool in a rushing river can be taken as an allusion to larger forces which claim the lives of individuals, such as state exploitation in the drive for imperialist expansion of the modern nation-state of Japan. At the same time, Hijikata also pointed toward the creative potential of negative individual suffering in that it could foster renewal and recovery.

Hijikata's public farewell speech was re-contextualized in *Infant* to comment on the formative effects of disaster on the human body, whether as a natural event (the tsunami and earthquake as whirlpool) or as a man-made event (the nuclear disaster as whirlpool). Its particular evocation of generational experiences of local populations in the Tōhoku region was intended to offer an extension of empathy, however indirectly, to those who have suffered in areas directly affected by the earthquake and tsunami of 3.11.

In a subsequent scene, a younger woman in a hospital gown slips between lucidity and incoherence. She hallucinates a visitation by a man who calls himself "Odysseus". Odysseus longs for a midnight land of no name where there is "no king, country, religion, fear, culture". As Odysseus leaves, the woman suddenly vomits up a mouthful of raw cabbage he has given her to eat. A young man then enters a young man then enters wielding a knife. He repetitively stabs the air as he states, "We are dirty. We are stained. We are broken. Our bodies are polluted".



Figure 5. The young woman dances with a bell. Gekidan Kaitaisha, *Infant*, 2013.

Having witnessed these visitations, the young woman begins to convulse with a bell in her hand. "Listen! Everyone!" she yells, but the other bodies, which now writhe slowly on the floor in a pale blue light, seem not to hear.

Whether mediated through text (the actress), documentary video (Hijikata) or movement (the dancers), these semi-lucid memories in mythic, collective and personal registers reflected the formative effects of broader institutional violence upon the human body. In response to lived conditions in a nuclear disaster both in the centres and regional peripheries of Japan, artistic works like *Infant* and *Land of Hope* presage an unstable future for the living, and for those who are either very new to the world or who are yet to be born.

More disturbing than the cyclical repression and return of ordinary violence which may be read in the reference to *The Trojan Women* and Hijikata's allusion to death and re-birth, however, are the precursory signs these scenes suggest of the coming future. Present conditions are only a taste of what is to come for those who must grow up amid these unfolding sovereign power operations.

### **Life in a 'Fukushima' World**

If, as suggested in *Land of Hope* and *Infant*, the sovereign response to the nuclear disaster at Fukushima Daiichi NPP can be framed as creating a kind of 'war', then it is a covert or silent war in which exposed civilian populations are collateral damage.

In light of the scale of distribution of radioactive contaminants, authorities across several nations (such as the U.S.) are adopting a similar approach to Japan in relaxing their health and safety standards with regard to radiation exposure. As evidence of the present and future degeneration in public health emerges from a complex amalgam of chemical and radiation pollution, however, authorities may be forced to admit the recklessness of their singular accommodation of economic priorities. One indication of this is the court decision on 21 May 2014 regarding the restart of the two reactors at the Oi nuclear plant in Fukui prefecture, which stated that "... the operation of nuclear power plants as one means of producing electricity is legally associated with freedom of economic activity and has a lower ranking in the Constitution than the central tenet of personal rights". (Muroya, 13 July 2014).

Another indication is the increasing numbers of court proceedings being mounted by citizen groups. The lawyer Yanagihara Toshio and plaintiff Hasegawa Katsumi representing 'The 2<sup>nd</sup> Fukushima Collective Evacuation Trial', for example, made a public statement that amid the Abe government's focus on the shift to collective security and reinterpretation of the Constitution, areas of Fukushima prefecture were already war-zones in which children are trapped indoors due to radiation from the nuclear power plant. Given that incidents of thyroid cancer are increasing at a faster rate than in affected areas after the Chernobyl meltdown in 1986, Yanagihara argued that the central and Fukushima prefectural governments and Fukushima city government have abrogated

their duty to protect citizens from harmful radiation exposure by allowing and encouraging residents to continue living in and to return to contaminated areas. The plaintiff group demanded public education on low-level internal radiation exposure, 100,000 yen for each plaintiff in the collective action, and the resettlement of children and pregnant women from Kōriyama (60 kms from the Fukushima Daiichi plant), with provisions for long-term regular health management. They also demanded that the policy to expedite the return of civilians to contaminated zones be reversed. (Yanagihara, Hasegawa, 18 August 2014).

In the primary suppression of the physical and mental health of exposed populations, and the secondary suppression of sufficient information concerning the effects from radiological exposures, including those who seek to disseminate this information to the public and to express social and political dissent, it is possible to perceive the sovereign right to protect the people as compromised. Although the aim to strengthen state-corporate-military immunity while weakening biological immunity (not limited to national population) may be regarded as a sovereign gain in the short-term, in the longer term, the damages from this active and near-permanent deposition of radioactive materials in the biosphere is logically consistent with a lack of will or desire to confront and adequately prevent the root causes underlying the Fukushima Daiichi nuclear disaster.

In the context of a thirty-year transnational neoliberal state program of deregulation and privatisation, and the relentless drive of sovereign power to shape the global order and maximize economic growth at the expense of sustainable cultures and ecologies – the ‘commons’ – policy informed by limits, and principles of finitude or care (Cazdyn 2012: 22, 59, 130)<sup>13)</sup> seems to have been lost or abandoned. (Harvey 2003; Callinicos 2009: 17-22).<sup>14)</sup> Determining immunity in narrow terms of wealth and power, while obscuring causation and responsibility for its harmful effects from accelerated production, consumption and ecological despoliation, reflects how fundamental principles to ensure a thriving planetary biosphere in the longer term appear to have been forgotten.

Weakening biological immunity by transforming ecological systems in this way is to accrue an insurmountable debt for future generations of living beings. With such high stakes, the current policy of the Japanese government and its associated transnational partners cannot be considered as feasible in any cost-benefit equation that includes all important factors. In this mis-identification of the real threat from their continued transnational operations, a false immunity has been established.

For the reasons I have outlined, delay in public understanding of the actual threat has meant that exposed populations must bear the greatest burden from the violent operations of a transnational complex of sovereign power as represented in this case by the nuclear industry. Although *Land of Hope* and *Infant* depict only some of the aspects experienced amid the unfolding ‘Fukushima’ nuclear disaster, these artistic works reflect not only what was or is, but also what is to be. They elicit the future as it speaks to us in the present. The question is are we listening?

## Bio

**Adam Broinowski** is an Australian Research Council post-doctoral research fellow in the School of Culture, History and Language, College of Asia and the Pacific at the Australian National University. This is part of his research project, “Contaminated Life: ‘Hibakusha’ in Japan in the Nuclear Age”. His book “Cultural Responses to Occupation in Japan: the performing body in the Cold War and after” is to be published by Bloomsbury.

## Notes

- 1) The plant is similar to the actual Kaminoseki Nuclear Power Plant slated for construction in Yamaguchi prefecture.
- 2) This includes pollution from the Ashio copper mine from the late 1890s, the Okusawa mine collapse of 1936, the Shin-Chisso mercury releases into Minamata bay from the 1930s, the Yokkaichi asthma problems from petrochemical processing between 1957 and 1973 and the Miike coal mine explosion 1963.
- 3) One of the more recent polls attributed 59 percent opposed to the restart of the idled nuclear power plants, while 77 percent were in favour of phasing them out and only 14 percent were opposed to either.
- 4) On 10 September 2014 the National Regulatory Authority gave safety clearance after granting its initial approval in July for the 2 reactors at the Sendai plant in Kyushu to restart. At the time of publication, the operators still need the final approval of the local authorities, however, before the plant can be started.
- 5) The commonly accepted standard for radiation protection stipulates a maximum permissible dose of ionizing radiation for members of the public in non-emergency situations of 1 mSv/year (0.11 microSv/hour). For workers, the common standard is for a maximum permissible level of 100 mSv/5years with no more than 50 mSv in any year. (As per the 1972 industrial safety regulation for nuclear industry workers in Japan, in Grover, A. (2012) ‘UN Special Rapporteur’s Press Statement.’ Press Release, 12-058-E, 26 november, <http://unic.or.jp>).
- 6) Editors, TEPCO withheld Fukushima radioactive water measurements for 6 months’, *Asahi Shinbun*, 9 January 2014. Retrieved on 31 March 2014, from: <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201401090060>).
- 7) Dr Jacques Repussard, Director General of France’s Institute for Radiological Protection and Nuclear Safety (IRSN), for example, declared that ocean releases of contaminated water from the Fukushima Daiichi NPP was ‘the only way’ to be safe. 15 May 2014. Retrieved on 14 August 2014 from: [https://www.youtube.com/watch?feature=player\\_detailpage&v=C2MuHX9NKI#t=445](https://www.youtube.com/watch?feature=player_detailpage&v=C2MuHX9NKI#t=445).
- 8) A partial quote from Abe’s statement is “Fukushima no jōtai wa kichinto kanri sareteimasu. Kesshite Tokyo ni damēji wo atenai... Kenkō Mondai wa ima made mo genzai mo shōrai mo mattaku mondai nai to yakusoku suru”. (“The condition in Fukushima is strictly under control. In no way will Tokyo be damaged... I promise that the health problem has not been, is not and will be not be a problem in future”). (‘Morning Bird’, *Asahi TV*, 8:10 am, 7 September 2013. Author’s translation. See also, ‘20 nen Gorin: IOC Sōkai Purezen Shushō no Hatsugen Yōshi’, *Mainichi Shinbun*, 8 September 2013. Retrieved March 2014, from: <http://mainichi.jp/sports/news/20130908k0000m050093000c.html>).
- 9) Former PM Mori and head of the Olympics Committee, for example, declared that the Olympics would not be possible without nuclear energy production over the next six years. (“Genpatsu Zero’ nara Gorin Henjō shika nai...Mori moto Shushō,’ *Yomiuri Shinbun*, 18 January 2014. Retrieved on 19 January 2014,

from: <http://www.yomiuri.co.jp/olympic/2020/politics/20140118-OYT1T00775.htm>).

- 10) Although there have been several reports of deaths from inexplicable causes of Tepco workers, service and military personnel, and civilians who have either worked at Fukushima Daiichi or resided in areas affected by radiation, these have limited to blogs on the whole. Also, the relatives of the victims have been reported to have been offered 'hush money'.
- 11) Missile shield deployments are currently in Alaska and the Aleutian Islands, Greenland, Britain, Norway, Japan, South Korea, Australia, Poland, the Czech republic, Turkey, Georgia and potentially in Ukraine.
- 12) Cohen traces the link between possessive individualism and state military/legal operations in nineteenth century Europe and discoveries of biological immunity, which were both imported and interpreted in Meiji Japan. (Ed Cohen, *A Body Worth Defending: Immunity, Biopolitics and the Apotheosis of the Modern Body*, Durham, Duke University Press, pp. 19–22).
- 13) In the context of public health care, see Eric Cazdyn *The Already Dead: The New Time of Politics, Culture, and Illness*, Duke University Press, 2012, pp. 22, 59, 130.
- 14) The Trans-Pacific Partnership is a recent example of this dynamic.

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