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The Fukushima War

*Philippe Pelletier*¹

Abstract

More than half a century separates Fukushima from Hiroshima-Nagasaki. Yet these two geopolitical events are linked by war. By 1953, the United States was seeking to legitimize the use of civil nuclear power in Japan, the country that, after the atomic bombings, was the most strongly resistant to it. Nonetheless, by 1954, thanks to high-ranking figures who held the political and economic reins both before and after 1945, Japan's state capitalism was profiting from civil nuclear power. In May 2011, the public learned of the lies proffered by the Tokyo Electric Power Company (TEPCO), which ran the Fukushima Daiichi nuclear facility where, on March 11 that year, reactors went into meltdown after the earthquake and tsunami, and of how the authorities had concealed the trajectory of the clearly identified nuclear cloud affecting tens of thousands of people. This caused a strong reversal in Japanese public opinion: 75 percent of Japanese citizens are now opposed to nuclear power; the tolerable level of radioactivity – the invisible enemy – in the contaminated zones has become a subject of controversy. However, the benchmark for comparison is not the most similar event, Chernobyl (1986), but rather Hiroshima and Nagasaki, a completely different phenomenon.

We know that henceforth there will be a “before” and an “after” Fukushima, just as there is a before and an after Hiroshima-Nagasaki. However, these two nuclear-related events are quite different in nature, and the characteristics they do share are not those we might expect. Although atomic fission is the common denominator, the consequences of their respective origins diverge – an industrial accident for

1. The author would like to thank Marie Augendre, Marie Bellot, Marc Bourdier, Cécile Asanuma-Brice, Arnaud Doglia, Pierre Émerald, Paul Jobin, Raphaël Languillon, Christine Lévy, Dimitri Magnet, Christophe Marquet, Barbara Pelletier, and Thierry Ribault.

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Fukushima, military attacks for Hiroshima-Nagasaki – even (paradoxically, as we shall see) with respect to radioactivity. Yet their catastrophic proportions and geopolitical implications draw them together.

Represented in Japan by well-known numbers that refer to the dates on which they occurred – 3.11 for March 11, 2011; 8.6 and 8.9 for August 6 and 9, 1945 – Fukushima and Hiroshima-Nagasaki are geopolitical markers, each having both a temporal and a spatial dimension. In other words, to quote the late Pierre Gentelle, these are major spatial events generating widespread repercussions, both locally and globally, and affecting political action and ideological discourse in a number of countries. Their geography is fully fledged in that it comprises a physical and geophysical dimension, thus reflecting natural phenomena, nature itself, and the individualized perception that everyone has of it – scientists, individuals, and populations alike.

This is also about war. An actual war that ended with Hiroshima and Nagasaki. And a war now being fought against the invisible enemy of radiation at Fukushima and in other areas of Japan, with the country's "hot spots" (*hotto supoto*), "evacuation zones" (*hinan kuiki*), and other such "exclusion zones" (*haijo kuiki*). A war with devastated landscape, theoretically unaffected hinterland, and a division of the land dictated by emerging battlefields; and with its front lines and a population caught in the crossfire or forced to leave. In this war against radiation, the 2011 US military (Japan's occupiers in 1945) limited Operation Friends (*Tomodachi*) to the prefecture of Miyagi and did not go into the prefecture of Fukushima.

Wataru Iwata,³ the man behind "Project 47," which unites the victims of nuclear disaster, is not afraid to talk of "war." According to him, "the situation in Japan is looking more and more like one of war: the television, press, and Internet media are being urged to implement a voluntary gag order"; or, in other words, to curb their language and suppress their revolt (Ribault and Ribault 2012, 32). The disinformation is also provoking sentiments of war among some citizens, according to Tatsuru Uchida, professor emeritus of philosophy in Kôbe, who evokes "the anger of [major newspaper] readers who see it as a repeat of what happened during World War II."⁴ Then there is the daily newspaper *Asahi Shimbun*, for which covering the Fukushima accident is like covering a war since the only information available is provided by a single antagonist, namely TEPCO (Tokyo Electric Power Company – *Tokyo denryoku kabushiki kaisha*).⁵

2. 1933-2010.

3. This and all Japanese proper names in the paper are presented in English style, i.e., the individual's first name followed by the last (family) name.

4. *Asahi Shimbun*, July 14, 2011.

5. *Asahi Shimbun*, July 14, 2011.

Moreover, perhaps we can talk of the “war,” or at least defiance, of citizens against all types of authority, a war that is crystallizing new forms of confrontation. For essayist Sakaiya Taiichi, 3.11 marks “Japan’s third defeat,” after 1868 and 1945, thus implying that a war has indeed taken place.

Establishing Civil Nuclear Power in Japan as a Logical Outcome of Hiroshima

The atomic destruction of two Japanese cities, an act that has come to symbolize technological evil, if not the meanders of human modernity itself, was the result of a confrontation between two empires, to say the least. Beyond the tragedy and Japan’s surrender, this political/military process had two unexpected consequences. On the one hand, the “victimization” of the survivors of the atomic bombings (*hibakusha*) significantly helped negate Japan’s role as a “victimizer” in the war (1931-1945). On the other hand, the emphasis placed on the inhuman, thus supposedly *non-human*, nature of the bomb, brought nature into these events, a notion caricatured by the title of author Masuji Ibuse’s⁶ 1965 novel about Hiroshima, *Black Rain*, a best-seller in Japan and worldwide.

Thus, what fell upon the city was nothing more than a “bad rain.” Or was it divine punishment? Indeed, the very conservative governor of Tokyo, Shintaro Ishihara (reelected for a fourth term on April 10, 2011⁷) made a similar assertion after the 3.11 tsunami, a notion also reminiscent of the “punishing nature” concept that catastrophist philosopher Dupuy (2011) evoked in connection to the same tsunami.

Fukushima, an Attempt at a Natural Explanation before Returning to Solid Ground

There is no question that the Fukushima nuclear disaster was triggered by the double natural phenomena of earthquake and tsunami, but the outcome resulted from man-made decisions. These natural origins of the catastrophe have become a major issue – was it the seismic shock or the breaking of the wave that triggered the accident? Indeed, depending upon the answer, the interpretations and consequences are not the same.

If it was the earthquake, the seismic standards of the Fukushima Daiichi nuclear facility, and especially those of the building enclosing the first of its five reactors (No. 1, the plant’s oldest), can be called into question, and, consequently, those of

6. 1898-1993.

7. Asahi.com, March 14, 2011, 7:34 pm.

Japan's entire nuclear fleet. The chain of accountability thus pits the expert factions against one another: the seismologists; the engineers, who set the standards as members of the influential Japan Society of Civil Engineers (JSCE – *Doboku gakkai*), also closely connected to Japan's major construction companies (*zenekon*); TEPCO; and finally NISA (Nuclear and Industrial Safety Agency – *Genshiryoku anzen hoanin*). Yet according to the parliamentary inquiry report dated July 5, 2012, NISA neglected its responsibility for verifying the standards in question.⁸

A first battle of experts thus unfolded, one dating back at least to the Kobe earthquake in 1995, which occurred at a location unexpected by the majority of seismologists; they had been focused on the triple tectonic junction of the Izu region near Tokyo. Having heeded the warning, and equipped with new technology, some of these experts decided to reexamine their theories. Among them was, Yukio Hayakawa, a volcanologist at Gunma University, who stressed that the Japanese archipelago was emerging from a relatively calm period of seismic activity, from the 1960s to the mid-1990s, and that the seismic standards established at the zenith of the “economic miracle” period were insufficient. In August 2002, the Earthquake Research Committee of the Headquarters for Earthquake Research Promotion, which is primarily run by scientists, also maintained that “the possibility of earthquakes centered on the boundaries of the oceanic plates may be stronger than that of historic earthquakes,” which was confirmed by the 3.11 earthquake (Shiroyama 2012).

If it was the tsunami, the seismologists are still accountable, but to a lesser extent since some of them had raised the region's tsunami risk in the 1990s. The majority of the blame, however, lies with TEPCO. At 5.7 meters high, the dike it had built in front of the Fukushima Daiichi plant was only about half as high as recommended by various specialists and institutions (*Asahi Kîwâdo 2013 2012*, 17). Four days prior to the incident, the NISA had reminded the company yet again of the need to raise the dike to 15.7 meters. Research had shown that the 1898 tsunami had reached such a height in that zone.

Blaming nature for the nuclear disaster is one of the major issues of the crisis because it reduces some of the human liability – TEPCO is seeking to evoke a “natural disaster” clause in its proceedings with the Japanese government – and, on a broader scale, feeds a green, catastrophe-centered discourse that places nature at the heart of a world vision. We must keep this in mind when interpreting the remarks made by Japan's Emperor Akihito, who, it is important to note, is also the high

8. The English or French appellation of Japanese institutions will be used depending on their pronunciation or common use. In fact, the French use of the term “*agence*,” which is generally borrowed from English, is often a source of confusion because it is used to designate a government ministry, an institute related to the government via a ministry, or an organization funded by the government. However, this term will be kept for reasons of convenience and conformity.

priest of Shinto. As such, his shamanic attributions position him as the intermediary between the powers of nature and humankind.

The address he gave five days after the tsunami, on March 16, was only moderately exceptional because it was televised. We should not forget, however, that the Japanese emperor regularly takes a public stance, most notably with his apologies about World War II, made half a century after the end of the conflict (1989, 1990, 1992, 1996, and 2005). In his March 16 address, the emperor shared his prayers, expressed his compassion and hopes that everything would be alright, and encouraged the rescue and relief efforts. He only mentioned the nuclear issue once, declaring that his “other grave concern now is the serious and unpredictable condition of the affected nuclear power plant.”⁹ Everyone has their own opinion about how much the emperor knew at the time, leaving future scholars free to claim that “the emperor did not know,” or that “he was misinformed,” an argument already invoked in regard to his father, Hirohito, and his responsibilities during the war. But at least the nuclear question was mentioned.

Two months later (on May 18), in an address given to the general assembly of the All Japan Junior High School Principals’ Association, in Tokyo, the emperor again evoked the events of 3.11, but he spoke of a “natural disaster” (*shizen saigai*), using no other terms besides “the afflicted regions” (*hisaichi*) and “the completely afflicted regions” (*hibisaichi*).

Although in the highest circles of the Japanese government the focus is placed on natural causes, this notion has nevertheless met some opposition among a growing proportion of the civilian population, which is demanding an explanation. One of the July 5, 2012 parliamentary investigation commission’s key findings, and widely spread by the media, emphasized the fact that “The Fukushima Daiichi nuclear accident cannot be regarded as a natural disaster. It was a profoundly man-made disaster” (National Diet of Japan 2012, 5).

Why Japan?

Hiroshima-Nagasaki marked the conclusion of a cycle of classic imperialist wars in which the battles took place, at least in part, on the territory of the protagonists (Pearl Harbor, Iwo-Jima, Okinawa, etc.). It paved the way for a third world war, and even a fourth after the events of September 11, 2001, wars that affected the land of a third party (such as Korea, Vietnam, Afghanistan, Iraq) and that were all related to nuclear deterrence.

9. Available in Japanese and English on the website of the Kunaichô, the Imperial Household Agency. <http://www.kunaicho.go.jp/e-okotoba/01/address/tohokujishin-h230316-mov.html>

Due to the fact that military nuclear programs gave rise to civil nuclear programs, Fukushima happened, in part, because of Hiroshima and Nagasaki. Civil programs had to win over public opinion, first in Japan, which had suffered the effects of the atomic bomb and was a new US ally, then the rest of the world. Recalling this provides the answer to a familiar question: why were the Japanese insane enough to build nuclear facilities in a country known to be so seismically active?

The question as formulated poses a problem in itself. Who are “the Japanese” in general? Are they all equal, do they have equal influence, were they even consulted? The answer is “no.” This raises another, related question: what about the people in other countries with nuclear facilities? Did anyone ask for their opinion? Are their nuclear facilities truly safe?

In fact, these questions about Japan reflect a considerable amount of ignorance – possibly encouraged by those that such ignorance benefits – and project a form of racism against these decidedly strange, foreign populations, as illustrated by the supposed insanity of the Japanese. Besides inciting recurrent and nagging resentment, such questioning is hindered by a series of taboos that keep the majority of Japanologists, and Japanophiles attached emotionally or by family to the country, from delving further into issues that could be painful or shatter a beautiful object.

From the Atomic Bomb to Nuclear Power

Making a distinction between civil and military nuclear programs is pointless, even in Japan; in fact, especially in Japan, as we shall see (Ribault 2012a and b). Japan’s nuclear policy was established in the early 1950s, immediately after the nuclear holocaust. Not all ties were cut with the pre-Hiroshima period, however. Japan’s state capitalism, which, of course, passed from bellicose colonialism to more or less liberal democracy, maintained some essential structures, simply giving them a face lift (Pelletier 2012).

On December 8, 1953, US President Eisenhower gave an address at the United Nations, “Atoms for Peace,” proclaiming the need for just that. The prime target of this partnership was Japan. Transformed into a test country, Japan was suddenly put forth as a counter-example for third-world countries being lured by Communism, and as a model for the European countries undergoing reconstruction. Making the bombed country receptive to nuclear power would make it easier to convince other populations.

In 1954, a young Liberal Party congressman, Yasuhiro Nakasone, later to serve as prime minister (1982-87), asked the Diet (Japan’s parliament) to establish a budget for the development of nuclear energy. His request was approved and, in December 1955, the Atomic Energy Basic Law was passed. In August 1957, Japan’s first nuclear chain reaction was carried out by the experimental reactor of Tōkaimura.

At the same time, a serious accident threatened to undermine this nuclear program. Indeed, on March 1, 1954, the crew of a Japanese tuna boat, the *Daigo Fukuryūmaru*, was irradiated by an American nuclear test in the Bikini Islands. Focusing the Japanese public's attention on an event unrelated to the war – an experience many citizens were trying to forget – gave the *hibakusha* of Hiroshima and Nagasaki the opportunity to advocate for their cause. Previously, they had been avoided like the plague, somewhat like the Nazi death camp survivors who had difficulty making themselves heard after their return.¹⁰ Now, proper compensation and health care was established for them. As for the boat's crew, the US government reached an agreement with Prime Minister Shigeru Yoshida¹¹ and paid compensation.

In fact, this tragedy sparked a turnaround, and a large, pro-nuclear advertising campaign was later developed. A significant role was also played by what would become known as J-Pop (Japanese pop culture) – adored by young and old alike in the West and in East Asia – Japan's famous soft power, represented by manga, anime, video games, *cosplays*, and let's not forget the *otaku*.

Of course, Godzilla, a monster created by nuclear explosions that served as a metaphor for the nuclear weapons threatening to destroy the new Japan, provided fodder for this anti-nuclear sentiment. The first Godzilla movie was a huge success upon its release in 1954. Yet the terror it aroused was mingled with a fascination for technology and the demiurgic. The public showed less enthusiasm for the other movies in the series, and the monster himself remained silent. The focus progressively shifted to his ability to regenerate himself and his intelligence, while his destructive side was toned down to give him a more heroic dimension as a savior of the world (Yoshimi 2011).

Correspondingly, the number of pro-nuclear figures multiplied, the most famous of which was Tetsuwan Atomu (“Powerful Atom”), known in France by the euphemistic name of “Astroboy.” This brave little robot was created in 1952 by the manga king, Osamu Tezuka.¹² Although he attends school with children his own age and fights for good, democracy, and racial equality, the robot has an atomic heart. Doraemon, another famous manga character, is also powered by nuclear energy. However, Hayao Miyazaki, the director of Studio Ghibli, has said in reference to Tetsuwan Atomu/Astroboy's creator, “he never got over his inferiority complex about Grandfather Disney.” Disney, by the way, directed the short film, *Our Friend the Atom*, released in Japan in the late 1950s. At Tezuka's passing, Miyazaki supposedly declared that the Showa period, that of Emperor Hirohito's reign, had finally come to an end (Ishida 2011).

10. For more about the political reasons why the *hibakusha* were rarely or inadequately treated at first, see Nishitani 2012.

11. 1878-1967.

12. 1928-1989.

Key Figures Engaged in Politics

Two figures shaped Japan's nuclear power program in the 1950s. The first, Yasuzaemon Matsunaga,¹³ an industry magnate who earned the nickname "the electricity king" in the 1920s and 30s, had opposed the nationalization of the electricity sector in 1938, in vain. He would later lead the denationalization of the sector in 1951. However, because regional oligopolies were formed, this only marked a partial break with the state capitalism of the war period. A similar system was created when Japan National Railways (JNR or *Kokutetsu*) was dismantled in 1987 under the Nakazone government (the State still owns part of the company). In both cases, there was no true competition since the companies shared the market regionally and came to a certain understanding on the prices they charged.

Nine private electric companies were thus created in 1951 (a 10th was added in Okinawa when the prefecture was returned to Japan in 1972), all of which chose nuclear energy (with the exception of Okinawa). This turn toward privatization and reduced control by the State had a significant impact on the methods of management that led to the Fukushima disaster in 2011.

The second important figure was Matsutarô Shôriki,¹⁴ one of the characteristic Japanese political figures who pursued his career both before and after 1945 and supported positions that remained virtually unchanged. He was elected to parliament in February 1955 and named Minister of Nuclear Energy in Hatoyama's government the same year. He then became the first president of the national Atomic Energy Commission established by the basic law. In 1956, he was also named director of the Science and Technology Agency. At the time, Nakasone was president of the Nuclear Energy Committee in the House of Representatives. In 1959, Nakasone became Minister of Science during the Nobusuke Kishi¹⁵ administration, his first ministerial position in a long career during which he took a resolutely pro-nuclear stance.¹⁶

Like Kishi, Yoshio Kodama,¹⁷ Nakasone's protector, and Ryôichi Sasakawa,¹⁸ whom we shall focus on later, Shoriki was imprisoned for major war crimes after the 1945 surrender, before being released and exonerated of all charges in 1951. He began his career as a civil servant in the Ministry of the Interior (1911), where

13. 1875-1971.

14. 1885-1969.

15. 1896-1987.

16. After Fukushima, Yasuhiro Nakasone justified his nuclear policy by arguing that "we don't have any oil or gas, and our coal reserves are declining," *Asahi Shimbun*, May 24, 2011.

17. 1911-1984

18. 1899-1995.

he handled the repression of the students of Waseda University (1917) and the “rice riots” (1918), and, it is said, launched the anti-Korean rumors leading to the pogroms that occurred in the aftermath of the 1923 earthquake. His successful investigation into the regicide attempt on the future emperor, Hirohito (the “Toranomon affair,” 1924), earned him the recognition of important figures, and he suddenly found himself at the head of the daily newspaper *Yomiuri Shimbun* (1924). He founded the baseball league (1934) and the Yomiuri Giants team, all while actively participating in the actions of far-right political organizations (he took part in the assassination of an opponent in 1935), which ultimately led him to a ministerial position in the Koiso administration (October 1944).

After his release from prison in 1947, he became the great reorganizer of the professional baseball league in 1949. He returned to the *Yomiuri Shimbun* in 1950 and became the CEO of the private television channel NTV (Nippon Television – *Nihon Terebi*) the same year. After introducing a series of pro-nuclear articles entitled “After all we caught up the Sun” in his newspaper in 1954, he pursued his pro-nuclear political career (Ribault and Ribault 2012, 63).

In 2006, it was revealed that Shôriki had been recruited by the US Central Intelligence Agency (CIA) to promote American nuclear technology. Furthermore, several prominent Americans had ties to his television station, including William Castle, former US ambassador to Japan, and CIA consultant; Eugene Dooman, a former CIA agent engaged in “psychological warfare”; James Kaufmann, a lawyer for RCA and General Electric, professor of Western Law at the University of Tokyo, and CIA consultant; James Murphy, a lawyer and former agent for the OSS, the precursor to the CIA; and William Donovan, former director of the OSS and adviser for the National Security Act of July 26, 1947 (Ribault and Ribault 2012, 62).

In its early days, the majority of the programs that NTV aired were provided by the CIA and the US Information Services (USIS) (Arima 2006). In fact, it was NTV that aired Disney’s *Our Friend the Atom* in 1958.

As of 1955, the exhibit that Shôriki co-organized on the theme of “the peaceful use of nuclear energy” travelled throughout Japan. At its inauguration in Hibiya (Tokyo) on November 1, the US ambassador read a letter from President Eisenhower declaring that the exhibit was “a symbol of our countries’ mutual determination that the great power of the atom shall henceforward be dedicated to the arts of peace” (Ribault and Ribault 2012, 63). The exhibit remained in Tokyo for six weeks before moving on to eight other cities (Nagoya, Kyoto, Osaka, Hiroshima, Fukuoka, Sapporo, Sendai, and Mita). To varying degree, and with the exception of the *Tokyo Shimbun*, Japan’s major newspapers followed suit to promote nuclear energy (Bruno 2012; Gaulène 2012; Kamata 2012).

From a Nuclear “Allergy” to Nuclear Tolerance

Within this context, Japanese public opinion shifted from an “allergy to nuclear technology” (*genpatsu arerugi*), inherited from the Hiroshima and Nagasaki nuclear attacks, to a tolerance and, in certain sectors, an intense enthusiasm. What prevailed was the desire to find a way to benefit from the devastating power of nuclear technology by transitioning from military to civil nuclear programs. The decision, first by the Soviet Union then by China, to adopt a nuclear weapons program helped persuade the Japanese left wing to join the cause. Mitsuo Taketani,¹⁹ a Marxist theorist and renowned physicist – who worked with Nobel Prize winner Hideki Yukawa²⁰ on the discovery of the meson – was one of the main supporters of “the peaceful use of nuclear technology.” Adopting the position that “the Japanese are the only people in the world to have been the victims of nuclear weapons,” in 1952 he argued, “consequently, they have more right than anyone else to conduct research on the peaceful applications of this energy.”²¹

In accordance with the technological hunger of its socioculture, which is not afraid to usurp the role of the demiurge absent from its traditional views, Japan had no doubts that this ambition could be fulfilled. Prior to 1945, the Japanese government had already launched a military nuclear program. Due to lack of both means and raw materials, rivalry between the army and the marine forces, and unwillingness on the part of the physicists, it had not been fully implemented.

The nuclear holocaust thus tragically marked the end of the war while also ushering in a new era in a rather ambiguous manner, given that the other aim of Japan’s nuclear policy was to try to quash the feeling of complete powerlessness generated by the country’s defeat and the Hiroshima-Nagasaki destruction. According to essayist Morihide Katayama, the ambition, “assuming that Japan had lost the war due to its scientific inadequacy [. . .], was to take its revenge by triumphing in that very same field.”²² Like a *jūdōka* (judo expert) turning an unfavorable situation to his advantage, the country thus strove to transform destructive nuclear power into something positive. In the 1960s, a linguistic shift occurred, making a distinction between *genpatsu* (“nuclear power”), referring to civil nuclear power, and *kaku* (“atom”), which is essentially a synonym for the atomic bomb (Jobin 2011).

At the same time, in addition to renouncing its right to belligerency inscribed in the Constitution of 1947, in 1968 Japan adopted its “three non-nuclear” principles (*hikaku sangensoku*): the non-production, non-possession, and non-introduction of

19. 1911-2000.

20. 1907-1981.

21. *Courrier International* 1085, August 18-25, 2011.

22. *Courrier International* 1085, August 18-25, 2011.

nuclear weapons. It has since been learned that, in accordance with a secret clause in the US-Japanese agreement on the return of Okinawa prefecture in 1972, the US government had the right to stock nuclear weapons on its military bases in Okinawa, which is perhaps still the case.²³

Furthermore, Japan's highest political authorities have never hidden their long-held and recurrent idea – one that has been largely ignored by the sometimes one-sided field of Japanese studies – that the Japanese government could one day acquire nuclear weapons (Prime Minister Kishi in 1957, members of the Satô cabinet in 1964, Prime Minister Ôhira in 1979, and Prime Minister Nakasone in 1984) (McCormack 2007). It must be noted that the country produces plutonium by the ton, which could be used to manufacture nuclear weapons.

By focusing on the US origin of the two atomic bombs and the other possible ways of resolving the conflict – as the nonetheless poignant Hiroshima Peace Memorial Museum does, for instance – Japan's peace movement sometimes conveyed an anti-American sentiment that satisfied those who were nostalgic about the Empire as well as the pro-Soviet or pro-Maoist political Left. Moreover, it was along the same lines that Okinawa's left wing, backed by that of the Japanese mainland, supported Okinawa's restitution to the Japanese government, despite the fact that this position crushed the demands for independence expressed by those in favor of a Ryukyuan republic (Japan was the historic colonizer of the Ryukyuan people).

Japan's Nuclear Program from 1954 to Today

Japan's American ally, represented by General Electric, which equipped the country's first nuclear facilities, and the big Japanese companies that followed (Toshiba, Hitachi, Mitsubishi, and various construction companies) swept away any remaining hesitation. The questions of pollution and nuclear waste were pushed aside, or viewed with the same technoindustrial logic used to justify breeder reactors. As for the industrial complexes, the methods used to appease opposition by the local populations were promises, subventions, intimidation, and appeals to the common good – “it's for the good of Japan” (Kingston 2012).

The nuclear facilities were built in sparsely populated areas, as required by the Agency for Natural Resources and Energy (*Shigen enerugiichô*) managed by the MITI (Ministry for International Trade and Industry), which became the METI (Ministry of Economy, Trade and Industry) following the extensive government overhaul in 2001. The sites chosen were thus in peripheral rural areas that were nevertheless relatively

23. “Secret Files Expose Tokyo's Double Standard on Nuclear Policy,” *Asahi Evening News*, August 25, 1999.

close to major cities: the coastal areas of Fukushima and Niigata, for Tokyo; and Wakasa Bay on the Sea of Japan, for Osaka. These locations thus spared the urban inhabitants the view of the nuclear reactors supplying the energy they consumed.

The METI's Influence

The Japanese government began to accelerate its construction of nuclear facilities in the mid-1960s, and especially after the first oil shock of 1973, although this event was not the main catalyst of Japan's nuclear program, as has been demonstrated. NISA was not founded until 1978. Responsible for enforcing nuclear safety laws and regulations, it was placed under the authority of the MITI/METI. Two months prior to the Fukushima disaster, Akihiro Ôhata, a congressman from the Socialist Party (1990) then the Democratic Party, was the minister at the head of METI. He once also worked as an engineer in Hitachi's nuclear department. Thus, an industrial perspective of unwavering support for electric production had the advantage in the senior levels of government and ultimately prevailed. Consequently, NISA came under fire, especially after Fukushima, for having sacrificed the safety of the sector's employees and the inhabitants in favor of the private interests of the electric companies.

Through its Agency for Natural Resources and Energy (ANRE), the MITI/METI held an influential tool to advance its nuclear policy. In particular, it established a tax on industrial and domestic electric consumption (the *dengen sanpô kôfukin*), earmarked for a fund that financed local communities that agreed to have a nuclear facility built in their district in exchange for a small fortune (Aldrich 2012, 133; Kamata 2012, 274).

Since its beginnings, Japan's nuclear policy has appeared to be characterized by an economic-based response to safety issues and an unbridled march towards an increasing number of reactors. On the one hand, the series of sometimes serious accidents in Japan's nuclear facilities, along with those abroad such as Three Mile Island (1979) and Chernobyl (1986), have regularly triggered a battery of regulations and institutions (in 1961, 1992, 1999, 2001, 2006); but with their often overlapping scope of authority creating confusion in times of crisis, as with Fukushima.

Meanwhile, technological escalation continues regardless: an extremely costly and flawed breeder reactor project that is constantly revived (the Monju reactor; the Rokkasho breeder reactor, at the northern tip of Tohoku that has malfunctioned numerous times over the years), which would multiply the number of nuclear facilities. The 2006 revision of the national energy strategy, carried out at the METI's urging, mentions plans to double nuclear energy production, raising it to 50 percent by 2030, and to construct nine nuclear power plants by 2020 and another five by 2030 (Scalise 2012, 142 and 160).

In this respect, the METI and the Japanese government have a double perspective. Japan's energy independence must be ensured by eliminating its reliance on oil, and the country must fight to reduce global warming and its carbon dioxide (CO₂) emissions, a goal that nuclear energy can help to achieve.²⁴

TEPCO's Disastrous Management

Since it is the oldest facility, since its management has accumulated errors, dissimulations, and lies, and since it ultimately exploded, the Fukushima Daiichi nuclear plant represents all the flaws in Japan's nuclear policy, and even undermines the arguments of its supporters.

Indeed, Onagawa, another nuclear facility located about 100 kilometers to the north – thus within the earthquake and tsunami zone – did not experience the same difficulties. Managed by a different company, it is a newer facility, and a purportedly safer one. In any case it is certainly less vulnerable, as older machinery is more prone to effects of wear and tear, breakdowns, and failures, and consequent repairs that are ever more costly and increasingly alarming as nuclear energy becomes infinitely more dangerous. Nonetheless, the time spent on inspections conducted at Onagawa was twice that of those carried out at Fukushima Daiichi (Jobin 2011).

Completed in 1971, reactor No. 1 of the Fukushima Daiichi nuclear facility, which was designed by General Electric (Mark 1), was initially meant to last 30 years, a limit subsequently extended by an additional 10 years. It was supposed to be shut down in 2010, but TEPCO put up an opposition – successfully, as is well known. However, experts were aware of the risks early on. In 1972, Stephen Hanauer, a safety official for the US Atomic Energy Commission, issued a note stating, “the pressure suppression system used in General Electric Mark 1 reactors present unacceptable risks, and these reactors should be discontinued” (Ribault and Ribault 2012, 35).

This warning, reiterated in the 1980s by other experts, concerns 10 of the 54 reactors currently installed in Japan: five at Fukushima Daiichi, one at Onagawa, one at Matsue, one at Tsuruga, and two at Hamaoka. The latter is a facility located along one of Japan's most active fault lines, whose closure Prime Minister Naoto Kan demanded and obtained on May 6, 2011.

24. The ecological arguments of the fight against global warming, an issue that is of the utmost importance for Japanese authorities, especially since the Kyoto Protocol (1997), deserves a thorough analysis involving the evaluation of climate change, as well as its scientific, political, and geopolitical implications. There is no consensus on this issue in Japan (see the work of scholars like Shigeo Yoshida, Kunihiko Takeda, Toshio Yamagata, and Takahiko Soejima, among others) (Hughes 2012).

TEPCO is a specialist, so to speak, in catastrophic situations, as illustrated by two examples. The first involves the Kashiwazaki-Kariwa nuclear facility located on the Sea of Japan about 50 kilometers southwest of Niigata. Built in 1980-1985 to satisfy the desire of the most prominent politician of his time, Prime Minister Kakuei Tanaka,²⁵ who was a congressman for the district, the facility possessed seven boiling-water reactors of the same type as Fukushima Daiichi's reactor No. 1.

The facility was at the origin of a scandal that began in July 2000 when an engineer notified his superiors of several problems. The information eventually reached NISA's offices, which, on August 29, 2002, revealed around 50 anomalies and failures, as well as falsified leak test documents (reactors Nos. 1 and 2 at Fukushima Daiichi were also under scrutiny). On July 16, 2007, after a 6.8-magnitude earthquake off the shores of Niigata, the facility's operating reactors shut down automatically, but a fire broke out in an electric transformer outside the structure protecting reactor No. 3.²⁶ TEPCO did not have the proper equipment on site, so they called on the local fire department to help. On July 20, NISA revealed that radiation had leaked into the sea and the atmosphere.²⁷ On August 11, 2007, seismologist Katsuhiko Ishibashi, a professor at Kobe University, publicly declared, "Unless radical measures are taken to reduce the earthquake vulnerability of its nuclear facilities, Japan could experience a veritable nuclear catastrophe in the near future."²⁸ He then resigned from the committee of experts created in 2006 to establish the seismic standards for Japan's nuclear facilities.

A few months later, in December 2008, the International Atomic Energy Agency (IAEA) warned Japan that its safety criteria were obsolete, especially with respect to earthquakes of a magnitude greater than 7. Prime Minister Shinzo Abe admitted that the Kashiwazaki-Kariwa facility was not designed to resist the 2007 earthquake and that the alert was given too late. Yet the reactors shut down that year began operating again in May 2009.²⁹

Mox Fuel at Fukushima

Shortly before the 2002 scandal, it was learned that TEPCO was planning to use Mox fuel, an extremely dangerous fuel containing a blend of uranium and plutonium, in one of its reactors, with Japanese Atomic Energy Commission's (JAEC) authorization. A referendum on using Mox fuel was held in 2001 in Kariwa, the

25. 1918-1993.

26. *Marianne* 2, March 25, 2011.

27. Report of July 20, 2007 (NISA, METI).

28. *Asahi Shimbun*, August 11, 2007.

29. *Le Monde*, March 13, 2011.

town that is home to the Kashiwazaki-Kariwa plant: 53 percent of the voters were opposed. After the 2002 scandal, the CEO of TEPCO announced the indefinite suspension of its use of Mox fuel.

However, the company turned its focus to Fukushima, which constitutes the second example of its disastrous management. In July 1999, a first shipment of Mox fuel was transported from Cherbourg to Fukushima Daiichi; it has been stored in the pool of reactor No. 3 since 2001. On August 29, 2002, Eisaku Sato, the then governor of Fukushima-ken (reelected five times between 1998 and 2006), received a fax from NISA informing him that “TEPCO admits to falsifying the content of inspection reports on damage detected on the core shrouds of two reactors at Fukushima Daiichi.”³⁰ He later discovered that NISA had received similar information previously, but had failed to inform him of it (Onuki 2011).

The scandal led to the temporary shutdown of 10 of TEPCO’s reactors in April 2003 (including Fukushima’s reactor No. 1) and the resignation of five of TEPCO’s directors; it also incited employees to write letters “from the inside” about their concerns regarding the noncompliance of safety standards and working conditions in the facility. Consequently, Governor Satô, who initially supported the use of Mox fuel, ultimately rejected the idea. In 2006, he was arrested by the special investigation department of Tokyo’s public prosecutor’s office on allegations of corruption in the construction of a dam commissioned by his prefecture. In September 2010, reactor No. 3 at Fukushima Daiichi began operating with 30 percent of Mox fuel supplied by Areva.

About two weeks before the disaster, in a report submitted to NISA on February 28, 2011, TEPCO admitted having falsified several inspection reports. In fact, the company had failed to inspect 33 elements of Fukushima Daiichi’s six reactors, including an engine and emergency generator for reactor No. 1, as well as an electric panel that had not been inspected in 11 years.³¹

Given these examples, and there are many others, the Fukushima tragedy resonates as a prime example of a disaster waiting to happen.

An Important Turn in Mid-May 2011

Two months after the 3.11 disaster, in May, three events occurred in a short time period, marking an important turning point.

Firstly, two reports were published on May 14. The first, from TEPCO, admitted to several lies and omissions, particularly regarding the meltdown of reactor No. 1

30. *Le Monde*, March 28, 2011.

31. *Herald Sun*, March 20, 2011; *Le Monde*, March 23, 2011.

(which had not been revealed on March 11) and the explosion of reactor No. 2 (on March 15, and which TEPCO had previously refuted).

The second report concerned the SPEEDI³² simulation of the tropospheric propagation of the radioactive plume. It noted that the simulation was conducted late in the morning of March 12 by the Nuclear Safety Technology Center (NUSTEC, which is under the authority of the Ministry of Education and Science – *Monbukagakushô*). It also specified that the results were purposely withheld from the public so as not to alarm the population. The simulation clearly shows the path of the cloud that escapes the facility and heads northwest before turning south along the west coast, thus extending far beyond the zones officially designated as dangerous (Takigawa 2012) (see Map 1).

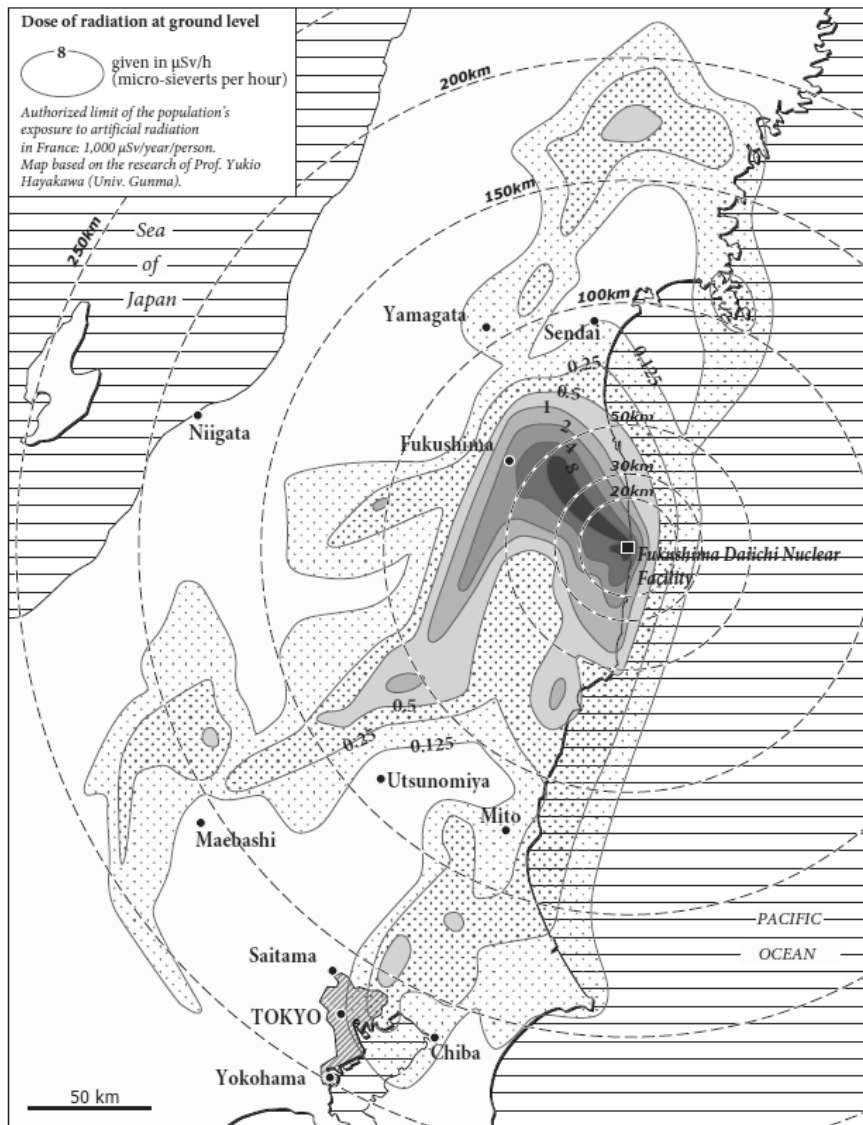
In other words, although some individuals in the highest levels of government were aware of the radioactive cloud, neither the local authorities nor the local population were concretely informed of the risks, danger zones, or appropriate measures to be taken (see map 2). Instead they were purely and simply abandoned to the radiation. What purpose, then, did the 13 billion yen (130 million euros) spent to develop SPEEDI actually serve? The disparity between the evacuation and danger zones defined by the authorities and the actual radiation zone, with both its weak and hot spots, often located in relation to localized precipitation or runoff, was equally appalling. The two zones were not at all the same. The concentric layout of the radioactive zones probably responded to a bureaucratic logic and simplified logistics for evacuations, but it was entirely insufficient and irrelevant.

Secondly, on May 17, Prime Minister Kan announced his desire to revitalize Japan's energy policy and proposed the creation of an advisory board responsible for developing a new growth strategy. This was the first sign of the nuclear phase-out he announced to the Diet on July 13, in the hopes of creating "a society that is not dependent on nuclear energy." Although this declaration was rather convoluted, Kan's political days were numbered. His resignation came a month and a half later following a smear campaign orchestrated primarily by the *Sankei Shimbun* and the *Yomiuri Shimbun*, two daily newspapers in which TEPCO is a major advertiser. Political maneuvering on the part of the opposition, and from his own political party in which he had already lost influence, also played a role in his resignation. The rise in popularity that Kan had earned thanks to his criticism of TEPCO and nuclear power – before Fukushima his popularity was plummeting in the polls – made absolutely no difference, especially since some believed that his abrupt reversal of opinion on nuclear energy was nothing more than political strategy.³³

32. System for Prediction of Environment Emergency Dose Information.

33. On December 3, 2010, Kan, who had declared that "green growth" was a key element of the "regime change," confirmed the remarks made the day before by a top METI official, who announced that Japan's energy policy no longer complied with the Kyoto Protocol (Rieu 2012; Guthmann 2012).

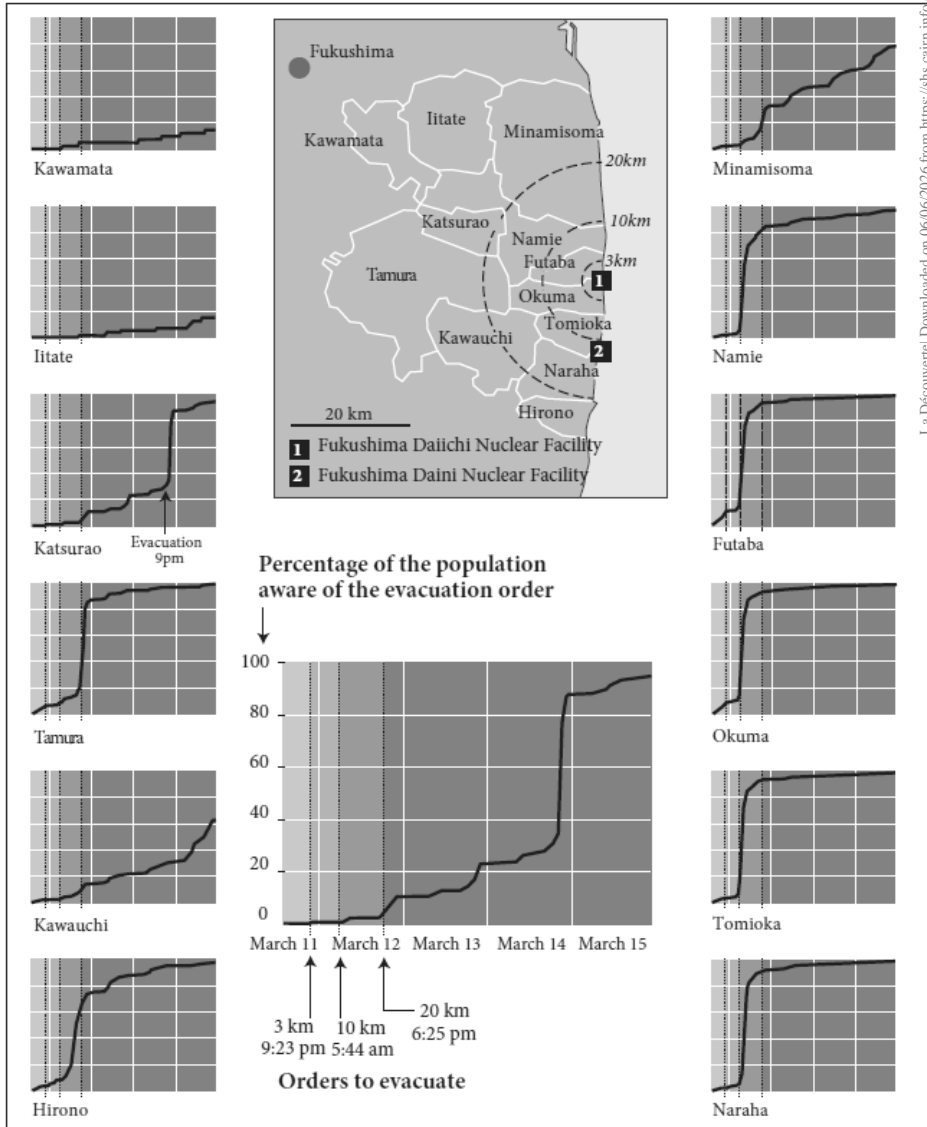
MAP 1: THE GEOGRAPHIC PATH OF THE RADIOACTIVE PLUME OF THE FUKUSHIMA DISASTER OF MARCH 2011



La Découverte | Downloaded on 06/06/2026 from https://shs.cairn.info (IP: 216.73.217.69)

Hérodote, n° 146-147, La Découverte, 3rd Quarter 2012.

MAP 2: STAGES OF EVACUATION AFTER THE MARCH 11 FUKUSHIMA DISASTER



Finally, on May 18, the Japanese emperor evoked the “natural catastrophe” of 3.11 without making any references to nuclear energy. Although his address was scarcely commented on in the Japanese media, and even less in the foreign press, there is no doubt that nuclear supporters understood its importance and that, in a way, it represented the front lines of the Fukushima “war.”

One of the major consequences of this mid-May turnaround was the shift in Japanese public opinion, which had previously been favorable or neutral with respect to nuclear power, and which was still suffering from the triple shock of the earthquake, tsunami, and nuclear disaster. The public was alarmed by the revelations of the two reports, TEPCO’s lies, and the dissimulation of the radioactive cloud’s path. From that point onward, its opposition to nuclear energy increased, as illustrated by several polls conducted by various institutions and the level of participation in anti-nuclear demonstrations. The alternative media, which had offset the official and established media during the crisis, had become an essential source of information, especially on the Internet. Support networks that had initially grown out of a desire to provide mutual aid gradually turned their focus to nuclear issues, acquiring new technical, logistic, and intellectual capacities. As they were greatly concerned about their children’s possible exposure to the radiation and the effects on their growth, women and mothers, who were already quite active in volunteer organizations, continued to play a significant role (Lévy 2012).

The Nuclear Geography of Fukushima

The questionable delimitation of the safety zones, which resulted in a sometimes arbitrary deterritorialization, also has implications on the accepted radioactivity standards and their measurement (see fig. 1). These two issues have become the object of a fierce battle. Previously, the exposure limit for nuclear workers in Japan was set at 20 mSv per year. Following a request from TEPCO and the NISA, the Ministry of Health and Labor raised it to 250 mSv per year on March 14, 2011, the applicable level for the employees working at the Fukushima Daiichi facility after the disaster. According to the International Commission on Radiological Protection (ICRP), the highest acceptable level is 20 mSv per year for five years for nuclear workers, and 1 mSv for the rest of the population (Jobin 2012b). The Japanese government has set the threshold at 20 mSv per year at which the population is evacuated from contaminated zones.

The Measurement Issue

This type of measurement, like others of a similar nature, raises at least three problems. First is the quality of the data. The amount, location, and surroundings (in

relation to the ground, air, or a contaminated object) all have clear consequences on the nature and accuracy of the results. Those from the French Commission for Independent Research and Information on Radioactivity (CRIIAD – Commission de Recherché et d'Information Indépendantes sur la Radioactivité), for instance differ from those obtained by certain Japanese authorities (Chareyron 2012).

Then there is the issue of how much reliable equipment is available. On March 24, 2011, in good or bad faith, the NISA responded that “given our lack of personnel, we truly regret that we are unable to analyze the existing data.” As for TEPCO, it currently has only one air monitor capable of measuring the number of becquerels in the air at Fukushima. The situation that followed the explosions at the facility revealed Japan’s significant lack of resources and equipment. For the world’s third-largest economy this is strange, to say the least.

The second problem concerns the manipulation of data. This is a particularly pertinent issue for nuclear workers, since the discovery that for years employees have been using forged stamps, among other methods, to falsify their health documents in order to have a clean bill of health (Jobin 2011, Jobin 2012b).

Third and finally is the problem of the legitimacy of acceptable radiation thresholds, which have been the object of complex debate both in Japan and internationally. This issue is especially intricate – it involves the stance of intellectuals (according to scientific tradition, their results can always be challenged); the nature of the organizations supporting their research (either more or less independent or having ties to influential individuals or bodies); the influence of pro- and anti-nuclear movements; and, finally, the day-to-day life of the inhabitants, especially those on the front lines.

The nature of radiation itself adds to the difficulty – because of its invisibility, and because of its effect, which in order to be understood unfortunately requires victims, and serious, in-depth, and long-term scientific studies. The victims exist and can be divided into four groups (excluding the special case of medical radiation victims). These include victims of nuclear weapons testing, nuclear workers, victims of civil nuclear accidents, and victims of Hiroshima-Nagasaki.

There are some disparities in the ways in which victims of nuclear weapons testing in various countries have been studied; in particular in the United States, France (both countries conducted testing in the Pacific Islands), and Russia. Military confidentiality and a lack of will on the part of authorities have complicated the task.

Naturally, nuclear workers are also concerned, but they are not necessarily easy to identify. In Japan, more than 75 percent of employees in the sector work for subcontractors or temp agencies. They thus move from one facility to another like “nuclear gypsies” (Jobin 2011).

The victims of civil nuclear accidents, notably Chernobyl’s victims, seem to be the easiest to study. However, the medical studies contradict one another and have been the

object of heated controversies involving various health and scientific authorities, which are more or less dependent upon the entities that commission their work. The opposition fundamentally lies on two sets of conclusions; those of the World Health Organization (WHO), under the auspices of the IAEA, via the 2005 Chernobyl Forum, which are optimistic; and those of the New York Academy of Sciences and the International Agency for Research on Cancer (IARC), which are pessimistic (Jobin 2012a).

A consensus may be found for the last category of victims, i.e. those of the nuclear bombing of Hiroshima-Nagasaki, who were the object of countless, and supposedly indisputable, studies. But this is where the exception lies, and where the Fukushima war comes full circle.

The Paradigm of Hiroshima and Its Limitations

Indeed, the dominating paradigm of radiation protection standards and their epidemiological foundation are based on the events of Hiroshima-Nagasaki, not Chernobyl (Jobin 2012a). Yet the nature and duration of the radiation caused by an atomic bomb are not identical to those caused by a nuclear disaster. One of the crucial questions is that of low levels of exposure to radiation and their impact on health, not only in the short term, but also in the mid and long terms. This is not a new debate in Japan. The question has been raised several times over the years by Hiroaki Koide, a former nuclear energy engineer and a specialist in radiation measurement and nuclear safety at Kyoto University, as well as by Hiroshima-Nagasaki victim-support organizations and those opposed to nuclear facilities. The Chernobyl debate thus continues.

The IARC has drawn conclusions that could call the Hiroshima model into question, notably due to the research conducted by Elizabeth Cardis and the work of Chris Busby, but authorities like the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the ICRP, despite internal pressure, tend to ignore them. Japanese epidemiologist Shigenobu Nagataki, the former director of the commission of inquiry on the *hibakusha* of Hiroshima, has even contested their scientific validity (Jobin 2012a).

Sharing his opinion is Shunichi Yamashita, an endocrinologist, dean of medicine at Nagasaki University, the vice president of Fukushima Medical University, and one of the eight members of the prime minister's Nuclear Disaster Expert Group (NDEG – *Shushô kantei genshiryoku senmonka gurupu*), created in April 2011. Anti-nuclear groups have accused Yamashita of having minimized the impact of radiation and criticized him for declaring, “animal experiments have proven that radiation will have an impact on your health if you don't smile.”³⁴

34. *Der Spiegel*, August 19, 2011.

of “erasing the emotional exhaustion caused by the fear of radiation” because “it eats away at people’s morale” (Ribault and Ribault 2012, 132). The Nippon Foundation has been highly active in supporting scientific research on the health effects of the Chernobyl disaster. In 1991, for example, it began financing a mission in which Yamashita participated and which produced the following conclusions: “With the exception of a dramatic increase in thyroid cancers among those who were exposed to radiation at a young age, there is no solid indication of any radiation-induced cancer or leukemia among the most-affected populations.”³⁵

The foundation is also known by its former appellation, the Sasakawa Foundation, named after its founder, Ryôichi Sasakawa, Yohei’s father. Imprisoned (1945-48) for heinous war crimes, Sasakawa was released during the Cold War and continued his activities with right-wing extremist groups and the *yakuza* (Kaplan and Dubro 2002). Of the many scandals surrounding the Sasakawa Foundation, one involved suspicions of corruption in the 1993 reelection of Japan’s Hiroshi Nakajima as the head of WHO, an organization that the foundation has supported quite generously.³⁶

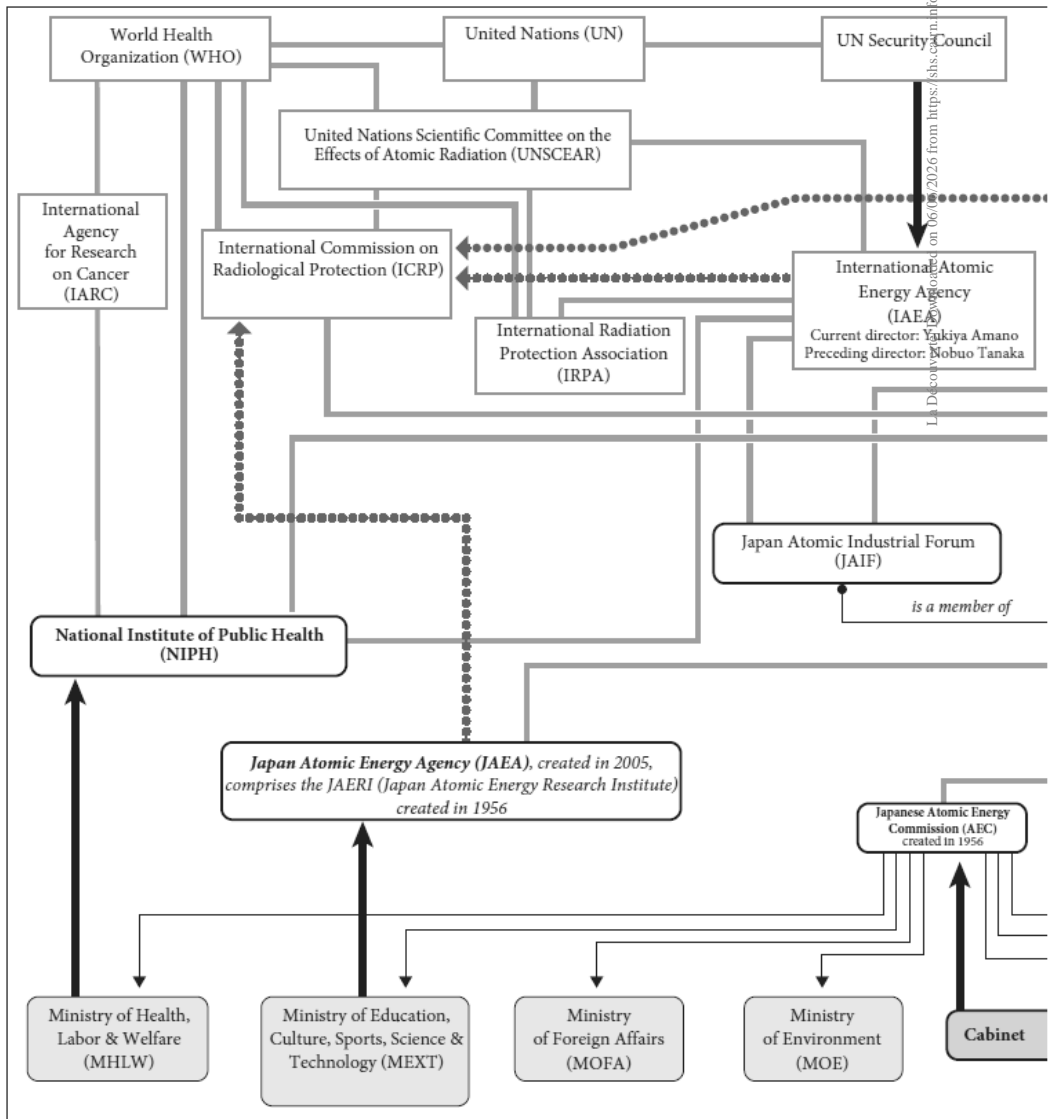
Since the 1990s, the Nippon Foundation has also financed the Radiation Effects Research Foundation (RERF – *Zaidan hôjin hôshasen eikyô kenkyûjo*), which became involved in the Fukushima prefecture public health investigation after the disaster. In 1975, the RERF replaced the Atomic Bomb Casualty Commission (ABCC), created by US President Truman in 1946, which was responsible for studying (but not treating) the physiological effects of the atomic bombs. The ABCC collaborated with the Japan National Institute of Health (JNIH – *Kokuritsu yobo eisei kenkyûjo*, or *Yoken*), founded in 1947 by the occupying US forces, which compelled the *hibakusha* to submit to radiation studies, persuading them that they were actually going to provide them with medical assistance (Ribault 2012, 134).³⁷ Some JNIH staff were also members of Unit 731, which was known for conducting biological and chemical experimentation on humans, as well as vivisection, during the war. Six of the eight directors that ran the JNIH from 1947 to 1983, like Saburo Kojima or Ken Yanagisawa, were former members of Unit 731 (Harris 2002). According to Professor Shigeo Shibata of Hiroshima University, the sole purpose of the data collected by the JNIH and ABCC was to modernize nuclear weapons and nuclear power facilities (Ribault 2012a; Lanouette and von Hippel 1990, 6).

35. “Report of the health effects of the Chernobyl accident.” http://naosite.lb.nagasaki-u.ac.jp/dspace/bitstream/10069/9375/1/acta51_04_139.pdf

36. “The benefactor, with links to the underworld,” *Sunday Telegraph*, September 20, 1993. “Organisation mondiale de la santé, scandales et gabegie,” *Le Point* 1334, April 11, 1998.

37. This refers to work by Sheldon Harris, “Japanese biomedical experimentation during WWII,” *Military Medical Ethics*, vol. II, US Army, Department of Defense, Office of the Surgeon General, 2003.

FIGURE 3: JAPANESE AND INTERNATIONAL



After having flirted with negationism regarding the Nankin massacre (winter 1937-38),³⁸ it would appear that the Nippon Foundation is practicing nuclear revisionism, as are some of the organization's former comrades. The war thus continues

Nuclear Capitalism or Green Capitalism?

The Fukushima disaster revealed the impressive strata of the various governmental, public, semi-public, and private organizations involved in nuclear energy. It has highlighted the collusions and consanguinities, the revolving doors between the public and private sectors, and the political connections that characterize what the Japanese are now calling the “nuclear village” (*genpatsu mura* or *genshiryoku-mura*); that is, the close circle of government bodies, manufacturers, and individuals involved in the promotion of nuclear energy who believe that nuclear facilities are safe and who reject all differing points of view. *Mura* (village, community) refers to the idea of a small group conducting its business in isolation.

However, the Japanese system is not monolithic. Discord exists and is intensifying among scientists (seismologists, radiation epidemiologists, doctors, etc.) with respect to nature and the severity of the disasters, as well as between the local, national, and international authorities who employ or call upon these experts. The discord is visible in the positions taken by the various government ministries (the pro-nuclear METI; the doubtful or hesitant Ministry of Environment and Agriculture; and the Ministry of Health, which has agreed to lower certain protection threshold levels). They oppose the Democratic Party (DPJ), in power since 2009; and the Liberal Democratic Party, which led the country for half a century and in which a large majority of the DPJ actually originated. The discord can even be found within the DPJ itself, among Prime Minister Kan's partisans and the party's internal opposition. It pits TEPCO against the State, which nevertheless ended up nationalizing the company de facto in June 2012 in concert with Tokyo Prefecture, which is now the main shareholder.³⁹

The different levels of authority either pass the buck or make decisions covertly or against their hierarchy. Thus, on March 12, 2011, a few hours after the hydrogen explosion in reactor No. 1, TEPCO's management ordered the Fukushima Daiichi plant manager to stop using seawater to cool the reactor, but he refused to comply. Kan, who was fed up with the lack of information provided by TEPCO in Tokyo,

38. Karoline Postel-Vinay, and Mark Selden, “History on Trial: French-Nippon Foundation Sues Scholar for Libel to Protect the Honor of Sasakawa Ryōichi,” *The Asia-Pacific Journal* 17: 4-10, April 26, 2010.

39. *Yomiuri Shimbun*, June 28, 2012.

decided to travel to the site that very day, a decision that the company and the opposition party later criticized, arguing that it led to his making bad decisions and/or hindering operations. At least Kan formally prohibited TEPCO's teams from leaving the Fukushima facility, which was their intent when reactor No. 1 went into meltdown at 6:30 pm on March 11.

The binary oppositions that shape Japan's state capitalism into a skillfully controlled oligopolistic competition also affect the question of an alternative to nuclear energy. Large pro-nuclear companies like TEPCO, Mitsubishi, and Toshiba, as well as the *zenekon* of the construction industry, find themselves confronted with equally powerful companies that favor renewable energy, like Mitsui, NTT Docomo, and Softbank. These are the companies that Masayoshi Son – Softbank's CEO and the richest man in Japan – is trying to bring together in a joint renewable energy plan that was approved by 35 out of 47 governors and presented to the public on May 25, 2011.

Son had the support of Prime Minister Kan, who had announced at a press conference on May 10 that he wanted to reinforce nuclear safety, develop “natural and renewable energy,” and dissociate the sectors of electricity production and electricity distribution. This last point is a reference to the FIT (feed-in tariff) system, a mechanism that stimulates investment in renewable energy by guaranteeing market access (DeWit et al. 2012). Kan made this one of his prime targets. In fact, in the aftermath of a failed confidence vote against his government in the Diet on June 2, it became one of the items of negotiation that he submitted publicly on June 28 in exchange for his resignation as prime minister. This succeeded when he left government on August 26, 2011.

In addition to the multiple battles between the various actors, there is the veil of secrecy and misinformation that most certainly constitutes one of the main issues of this nuclear war, in a time when the transparency and courage of the media seem to be as complicated as radiation's invisibility.

The Economic World War

The powerful, international, economic, and political/military dynamics of nuclear energy, and the underlying health and scientific issues illustrated above, have a direct influence on the changing front of the Fukushima war within Japan itself. Among the players are the United States, with Japan a leader in civil nuclear power (and perhaps a future nuclear weapons state) thanks to General Electric and Westinghouse; and France, which, because of Areva and its promotion of MOX fuel, is the main competition. In recent years, Japan has also positioned itself as a rival, with hopes of selling its nuclear technology to Vietnam, Jordan, and especially to India and China.

In addition to the colossal amounts of money involved, a new geopolitical web is taking shape in the background, a web that, in the eyes of leading policymakers, must not be disturbed by Japan's growing anti-nuclear movement encompassing 75 percent of Japanese citizens at present, even if that means minimizing the magnitude of the Fukushima disaster.

Events in Japan since March 11, 2011, are inscribed within fierce, global, economic competition. In global financial marketplaces, speculation against Japanese currency began just moments after the tsunami had swept through the country and the reactors had gone into meltdown. To counterattack, on March 15 the Bank of Japan sold the equivalent of 18 billion euros in yen, and the Federal Reserve of their American allies followed suit, selling US\$50 billion worth of yen.⁴⁰ The rise in the yen penalized Japanese exports by making them more expensive, but decreased the cost of importing the oil and natural gas used to feed the thermal power stations after Japan's 54 nuclear reactors were shut down or put into hibernation. To resolve the situation, the trade advisor for the Japanese embassy in Paris even suggested relocating the companies located in Tohoku, a clearly vulnerable region. But the main question was where they should be relocated to – China or Southeast Asia (Kataoka 2011).

Consequences

The Fukushima disaster did not cause any fatalities, officially at least and not yet. Based on the events of Chernobyl and the opinions of certain experts, we do not need to be specialists in radiation epidemiology to wager that it will not take more than five, or perhaps four, years for the first thyroid cancers to appear in and around Fukushima, followed by other diseases (De Vathaire et al. 2012; Baverstock 2012; Busby 2011; Cardis et al. 2007).

But the tragedy has already occurred: the contamination of hundreds of thousands of acres; more than 150,000 people evacuated; thousands of families separated, torn apart, or forced to leave; divorce, depression, suicide; suicides committed in protest; emergency housing that is becoming permanent; the arrogance of the pro-nuclear elite; the shortcomings of numerous decision makers; and what is perhaps the most unbearable, the minimization of the impact of the disaster (Asanuma-Brice 2012; Humbert-Amemiya 2012). There is the damage to harvests and the destruction of livestock. The effects on the food chain remain largely unknown, especially with respect to the marine ecosystem from the enormous quantities of radioactive materials that were dumped into the ocean.

40. *L'Expansion*, March 22, 2011.

Arguments put forth by nuclear supporters have not changed. They cover the absence or weakness of renewable energy in Japan (debatable, at least with respect to hydraulic, solar, wind, and geothermal energy); the need for electricity (true, but this leads back to modes of production and consumption); Japan's energy independence (ignoring the dependence on the uranium and nuclear technology provided by other countries); and the lower cost. This last point may seem difficult to refute, but, in fact, it is the most debatable when we consider all of the additional costs, external diseconomies, renewal of the nuclear fleet, maintenance, compensation, and the issue of radioactive waste – all of which represent astronomical sums of money.

Of course, Japan has a lot on its plate, and we must not forget the shock of the tsunami and the considerable damage north of Fukushima. Yet for essayist Satoshi Kamata (2012, 273), it is important not to reproduce, in relation to Fukushima and nuclear energy, the same schema in which the Japanese found themselves in the recent past: “even though a lot of people claimed to be against the Pacific War, they were unable to do anything about it [. . .]. We are facing the same issues we faced when we tried to oppose the war. This time we must not fail.” Given that many analysts considered Chernobyl to be a failure of bureaucratic Sovietism rather than a nuclear failure, should not Fukushima be viewed as a failure of Japanese capitalism, if not of capitalism in general? The answer to this question does not rely solely on the people of Japan.

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