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Radioactive Rain and the American Umbrella

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The End of the "Affluent Postwar"

With the earthquake of March 11, 2011, and the expanding nuclear disaster that followed, our "affluent postwar" has finally reached a decisive end. Indeed, this closure had been clearly augured since the 1990s. The collapse of the bubble economy, the close of an era of single-party rule by the Liberal Democratic Party, and the Great Hanshin-Awaji Earthquake and Aum Shinrikyō sarin gas attacks that came in rapid succession in 1995—these events forced upon us the reality that the "affluent postwar" was over.

On January 17, sixteen years ago, a huge earthquake centered in the northern part of Awajishima wrought massive devastation on the Hanshin area and the city of Kobe. The dead and missing numbered 6,434; the wounded 43,792; those requiring shelter 30,000; houses destroyed or damaged, 25,000. It was the most severe quake since the Great Kantō Earthquake of 1923. The region's lifelines were severed. The Hanshin Expressway collapsed in over a dozen places, the San'yō Shinkansen rail line was broken, and subway tunnels collapsed. Many buildings in city centers lay in ruins. The relentless footage of fallen highways and burning streets stunned television viewers across the country.

Then on March 20, 1995, while Japan was still reeling from the blow of the Hanshin Earthquake, members of the religious group Aum Shinrikyō launched sarin gas attacks on subways in the heart of Tokyo. Twelve passengers and station staff died; another 5,510 were wounded. Two days after the incident, the Metropolitan Police Department searched the Aum headquarters in Kamikuishiki Village in Yamanashi Prefecture. They discovered that the building contained facilities for manufacturing sarin and other chemical weapons. From the confessions of arrested Aum members, it became clear that the group had perpetrated several crimes, from a 1994 sarin gas attack in Matsumoto to the Tokyo sarin attack. Until the capture of Aum's leader, Asahara Shōkō, about two

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months later, Japanese society was wrapped in an abnormal fascination with this strange religious group.

It is highly symbolic that the two earthquakes of 1995 and 2011 were accompanied by a chemical-weapon terrorist attack and radiation pollution from nuclear reactor meltdowns respectively—in short, manmade disasters linked to contemporary science and technology. The days following March 11, 2011, witnessed a constant stream of television footage of representatives from Tokyo Electric Power Company (TEPCO) and the Nuclear and Industrial Safety Agency in press conferences on the burgeoning nuclear crisis. Their expressionless visages, so disconnected from reality recalled the Aum Shinrikyō members on television sixteen years before. Moreover, the media images of the reactor buildings of the Fukushima Daiichi nuclear plant bore a disturbing outward resemblance to the "Satyam," Aum's former headquarters, which we had often seen on television back then. The main difference was that several of the reactor buildings had been so badly damaged by explosions that they retained none of their original form. Nonetheless, there are similarities in the way the public reacted to these two incidents. Both revealed the strong distrust people feel towards science, technology, and experts today.

Our hearts constricted in helplessness as we watched scenes of the tsunami devastating the Tōhoku coast, leaving a rubble-strewn wasteland in its wake. Over twenty thousand people without time to flee, lives swallowed by the waves and lost; all those countless souls—what on earth could we do for them, we who survived? Such thoughts coursed through the islands of Japan, and are likely to remain etched into the national psyche for a long time to come. The souls taken by this earthquake need repose. Earnest efforts are needed on their behalf and for the revival of the Tōhoku region. Even so, the tsunami and the nuclear crisis are different. The latter is a manmade disaster, the consequence of a situation created by postwar Japan's economic growth. It is a catastrophe that requires thorough investigation more than rites for the repose of lost souls. Yet as we look back in search of the origin of the incident, we find ourselves facing Japan's "postwar" itself.

America's Two "Nuclear Umbrellas"

Nuclear power in Fukushima goes back to 1960, the year of the massive protests against the U.S.-Japan Mutual Security Treaty. That same year, Fukushima Prefecture announced its intention to solicit nuclear facilities; the next year, in 1961, the town councils of Ōkuma and Futaba passed resolutions that approved building a plant. At the time, Fukushima's attempts to attract industry and kick-start economic growth were failing. With the shift in energy policy from coal to oil, the Jōban coal mine, formerly the largest industrial base in the prefecture, had begun to decline, and the prefecture was seeking a third source of electrical

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power to replace hydropower and thermal power. As luck would have it, the site of a former Imperial Japanese Air Force base was located along the coast facing the bluffs in Ōkuma. After the war, it had become salt fields, and the use rights to this vast piece of land were easily purchased. The acquisition process was completed in 1964, the year of the Tokyo Olympics. Construction of the first reactor began in 1967 and was completed in 1970, the year of the Osaka Exposition; it began operating in 1971. The process of soliciting, constructing and operating the Fukushima Daiichi plant thus overlapped exactly with the era of Japan's high economic growth in the 1960s.

Most nuclear power stations constructed in Japan commenced operation in the 1960s and 1970s. The first reactor at the Tsuruga plant, constructed slightly earlier than Fukushima Daiichi, as well as the Mihama one, both began operating in 1970. These were followed by the first reactor of the Takahama plant (1974), the Genkai plant in Kyūshū (1975), and the Hamaoka plant in Shizuoka Prefecture (1976). Generally it was a process of about ten years from initial plan to operation in each case. Since many of these plants added second, third and more new reactors, the increasing buildup of nuclear power actually continued into the mid-1990s. As a result, what began as four reactors in 1971, when Fukushima Daiichi commenced operating, had burgeoned to fifty-four by the mid-1990s, giving Japan the third highest number of nuclear reactors in the world, following only the United States and France.

But why were this many nuclear reactors planned concomitantly across Japan during the 1960s? A hint may be found almost a decade before local governments in Japan began soliciting nuclear complexes, in two policies that emerged in 1953–54 as part of the U.S. Cold War nuclear strategy: namely, the Eisenhower administration's "New Look" and "Atoms for Peace" policies. In spite of the fact that Truman had ordered the atomic bombings of Hiroshima and Nagasaki—or perhaps precisely because of it—once the massive devastation of those cities became clear, his administration declared the atomic bomb to be a last resort, something completely different from conventional weapons. In contrast, the Eisenhower administration's "New Look" policy equipped American bases all over the world with nuclear weapons, on the assumption that they had a practical function in warfare. It transferred nuclear weapon regulation from the Atomic Energy Commission to the military to prepare for a strategy of "massive retaliation" against the communist bloc. As a result, the NATO countries underwent intense nuclearization, acquiring in total seven thousand warheads. In Asia, South Korea, Taiwan and the Philippines experienced a similar nuclearization. Kadena and other bases on Okinawa are said to have held close to eight hundred warheads. By the time Eisenhower stepped down, the U.S. nuclear arsenal had soared to over twenty thousand warheads.

The other face of Eisenhower's nuclear strategy was "Atoms for Peace," which was designed to promote the peaceful use of nuclear energy worldwide. Addressing the U.N. in 1953, Eisenhower promised that America would

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cooperate with other countries on research into peaceful uses of nuclear power and the construction of nuclear reactors. By emphasizing the atom's "peaceful uses" and by announcing a willingness to share nuclear power's benefits with other countries, the United States softened its image as a military menace responsible for dropping atomic bombs and promoting the global expansion of nuclear weaponry, with the effect of making the atom palatable for the world's nations.

The Soviet hydrogen bomb tests of 1953 had shaken American primacy in offensive nuclear capabilities. The United States thus eagerly supplied the Third World with nuclear power technology and carried out joint development projects in order to draw them into its camp. The Soviet Union competed by the same means in the countries on its periphery. As a result, countries in the neutral space between the spheres of influence of the two superpowers became the targets of a "nuclear sales campaign." The United States itself promoted the introduction of nuclear power to countries like Iran, Iraq, and Pakistan—countries that eventually became large impediments to American world strategy.

Initially, the direct targets of the Atoms for Peace program were Third World nations of Asia that bordered on the communist sphere and not the former Axis Powers of Japan and Germany, which were already among the ranks of U.S. allies. However, in the eyes of Japanese conservatives, the technology offered by the program was an attractive possibility for Japan too. In particular, during the 1950s, future prime minister Nakasone Yasuhirō and the first president of the Atomic Energy Council, Shōriki Matsutarō (who was also the owner of the *Yomiuri* newspaper) were enthusiastic promoters of Eisenhower's nuclear strategy.

Even after Fukushima, the same Nakasone has continued to proclaim that "the world trend is undeniably toward nuclear power for the purposes of peace and energy provision." Back in 1953, he has recently recalled, "when I learned that Eisenhower had switched to a policy of using nuclear energy for peaceful purposes, I thought to myself, 'Japan can't fall behind. Nuclear energy is going to define the next era.'" (Yoshida 2011) Many conservatives had supported him on this point, allowing him to get the first nuclear budget through the diet, to set up a multi-party joint council on nuclear energy, and to play a key role in drafting the Basic Act on Atomic Energy, which became the foundation of Japan's national nuclear policies. Meanwhile, Shōriki played a key role alongside Nakasone by manipulating the mass media. The *Yomiuri* newspaper and Japan Television, both in his media conglomerate, initiated a campaign to promote the peaceful use of nuclear energy. As detailed by Arima Tetsuo, Shōriki was obsessed with the idea of building a microwave telecommunications network in the Far East and developed close ties to the CIA, as well as to electronics companies like GE and RCA; these companies were also key players in the nuclear power industry. Shōriki invited a group of Americans promoting nuclear

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energy to Japan, used the *Yomiuri* to campaign for nuclear energy development, organized exhibitions on the theme of the peaceful uses of nuclear energy, and even entered politics under the banner of nuclear power, finally landing the roles of the first president of the Japan Atomic Energy Council and the director of the Agency for Science and Technology.

From the standpoint of the Eisenhower administration, both the "New Look" and "Atoms for Peace" were founded on the same economic principle. In the view of the administration, it seemed likely that the Cold War would drag on for an extended period; for American society to sustain a protracted military standoff with the communist bloc, the American government would need to walk the tightrope of maintaining adequate monetary reserves by controlling military spending while simultaneously beefing up military infrastructure. The Korean War had already left the United States with a ballooning deficit, making it difficult to increase conventional armaments or land forces. In this situation, nuclear weapons were an attractive technology that was cheaper in relative terms, yet possessed far greater destructive capability. This was exactly the same rationale that drew electric power companies to nuclear reactors: compared to hydroelectricity, which required massive investment in dam construction for lower yield, or to thermal power, which was subject to the vicissitudes of the oil market, nuclear power was considered relatively inexpensive for the results it promised.

The *Lucky Dragon* and "Nuclear Energy for Peaceful Purposes"

"Atoms for Peace" implied more than an affordable new form of energy to sustain affluent lifestyles. It also had a particular political connotation: the forgetting of Hiroshima and Nagasaki. If nuclear energy surged ahead in various parts of the world, people would lose consciousness of the connection between nuclear technology and nuclear war. Anti-nuclear sentiments were particularly strong in Japan. Shōriki Matsutarō's confidant, Shibata Hidetoshi, who played a decisive role in the importation of nuclear power to Japan, commented in the early fifties that the "best way to crush the anti-nuclear opposition is by singing the praises of the peaceful use of nuclear power, thereby providing hope for a great industrial revolution." Through emphasizing "peace" which in turn meant "affluence," "nuclear power" became a symbolic device to help Japanese people forget their memories of the atomic bombs, and compel them to accept the shelter of the American "nuclear umbrella."

Yet, as Shōriki, Nakasone, the CIA, and their allies were engaged in these machinations, the *Lucky Dragon* incident occurred. On March 1, 1954, the United States exploded a hydrogen bomb in the Bikini Atoll that was a thousand times more powerful than the Hiroshima bomb. Radioactive fallout fell over an area of several hundred kilometers. This "experiment" exposed many residents

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living on the Marshall Islands to serious radiation, leading to deaths and long-term debilitating aftereffects. Several hundred fishing vessels sailing far outside the cordoned-off danger zone of the bomb test were also affected. One hundred fifty kilometers from the epicenter of the explosion, the Japanese trawler *Lucky Dragon* was especially badly hit: the boat was covered in radioactive ash, and though it hastened back to its home port of Yaizu its crew was diagnosed with radiation poisoning. One died. The remaining crew members survived only to continue struggling with the effects of radiation exposure. In due course it became clear that not only the *Lucky Dragon*'s crew had been directly exposed; fish already in markets around Japan were also contaminated by radiation. Radiation from the Pacific had been blown close to Japan, releasing a shower of radioactive rain. Strawberries and vegetables, tea and milk were all found to be radioactive, creating a large-scale problem.

Nuclear testing drew strong international criticism, but the United States insisted that the illness of the Japanese sufferers was not due to radiation but rather to the "chemical effect of substances in coral." U.S. officials asserted that the *Lucky Dragon* had been operating within the U.S.-determined no-fishing zone, although it was eventually determined that the boat had in fact been sailing outside that demarcated zone. Lewis Strauss, chairman of the American Atomic Energy Commission, further asserted that the denizens of the Marshall Islands were healthy and happy, that the crew of the *Lucky Dragon* might have been communist spies, and that their captain was in the employ of the Russians—and requested a CIA investigation into the matter. Members of the Eisenhower administration reported to the president that Japanese emotions towards nuclear weapons were abnormally sensitive and that the Japanese people had the mentality that they had been chosen to be martyrs. Even in joint U.S.-Japan talks held eight months after the hydrogen bomb testing, the American government consistently stressed that there had been no dangerous radiation exposure and unveiled a set of new standards that set the levels of safe radiation exposure a thousand times higher than before. Yet American import companies banned the shipment of canned Japanese tuna, requesting that they first be subjected to a thorough scanning with Geiger counters.

After the radiation exposure of the *Lucky Dragon* and the damage to Japan's fishing industries became widely known, opposition to nuclear testing became a national issue in Japan. Started by a group of housewives in Tokyo's Suginami ward, the anti-testing movement rapidly expanded, garnering some 32,000,000 signatures, one-third of the Japanese population at that time. The scale of this movement far exceeded movements based on existing political organizations. Public opinion surveys also showed overwhelming opposition to nuclear weapons. Although the Japanese government supported the view that the Bikini test had been essential for American security, this official interpretation only resulted in a public backlash, with anti-nuclear sentiments spreading even among conservatives.

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Before long, the Bikini Atoll affair spawned a commemorative film: *Godzilla*. The monster's mutated form metaphorically referenced the "ball of fire" (the H-bomb explosion) that had attacked the *Lucky Dragon*. *Godzilla* expressed the mass fear of the atom by tying the American H-bomb test, which evoked the war of the future, with Japanese memory of the war of the recent past, represented by the monster's destruction of Tokyo, an image that mirrored the Tokyo firebombing (Takeda 2002).

The Nuclear Energy for Peaceful Use Exhibition and Astro Boy

Given the intense fears of radiation within Japanese society, one might surmise that it would have been difficult for Japan to be incorporated under the shelter of America's "nuclear umbrella." No matter what the U.S. State Department or the Japanese government claimed, after Japanese society had experienced the trauma of radiation exposure a third time, it was impossible to eliminate nuclear fears simply by touting the grand ideals of the Cold War and anti-communism. On this front, the idea of nuclear energy for "peaceful use" and the image of the "affluent lifestyle" it promised came to be seen as a powerful trump card that might reverse the situation. According to Peter Kuznick, members of the U.S. National Security Council recommended that experimental-use nuclear reactors be constructed in Japan to develop a "strong offensive concerning their non-military use." Thomas Murray of the Atomic Energy Commission asserted that the construction of nuclear power facilities in a Japan that had experienced the atomic bombings would become a "dramatic and Christian gesture" that would decisively "lift all of us far above the recollection of the carnage (of Hiroshima and Nagasaki)." The *Washington Post* even commended Murray's idea as an ideal method to "dispel the impression in Asia that the United States regards Orientals merely as nuclear cannon fodder" (Kuznick 2011).

In other words, the strategic vision of the National Security Council and the Atomic Energy Commission dovetailed neatly with the vision of conservative forces in Japan (with Shōriki at their core) on this particular point: both factions saw the construction of nuclear power plants as an effective way to bring about "liberation" from memories of the atomic bombings. The culmination of this series of campaigns was an exhibition on the peaceful use of nuclear energy held in Hibiya Park, with the cooperation of the CIA, from November to December of 1955. The exhibition grounds displayed nuclear-powered trains and passenger planes, all exhibits that heralded the bright future of nuclear power. (Sano 1994) In fact, the exhibition was an expanded version of a previous event called "Nuclear Power Everyone Understands," which the *Yomiuri shinbun* had held in August 1954 at the Isetan department store in Shinjuku. The biggest draw at the 1954 exhibition had been a display of various components

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of the *Lucky Dragon*'s irradiated vessel. In this way, even a symbol of the movement against atomic and hydrogen weapons was used to sell the American ideology of nuclear energy for peaceful purposes. It was a trick truly worthy of a showman like Shōriki.

From the late 1940s, various locales in Japan jostled to hold exhibitions on reconstruction, trade and industry, seeing these events as devices to spur postwar recovery. (Yoshimi 2005) Many were sponsored by newspaper companies, either solely or jointly. For instance, the *Asahi shinbun* had held an "America Exhibition" in Nishinomiya, a large-scale affair that drew two million visitors. The grounds included an information tower shaped like the Empire State Building, a statue of Lincoln, panoramas of all the states and the American west; the White House, a hall of agriculture and a hall of religion. The *Yomiuri* exhibit on the peaceful use of nuclear power was thus an "atomic iteration" of these sorts of exhibitions, whose topics ranged from "holy war" to "America."

For Japan before the 1960s, nuclear power was a dream far from reality. When Shōriki and Nakasone created the path to lead Japanese under America's "nuclear umbrella," nuclear power was spoken of as an ideal that would be realized some day in the future. For this very reason, an idealized version of usable nuclear power had to be envisioned in a separate dimension, apart from the reality of the damage caused by atomic and hydrogen bombs. From the 1950s to the 1960s, this imagined vision of usable nuclear power was embodied in a figure intensely loved by children: the robot named Astro Boy (lit. "Iron Armed Atom") who carried a reactor in his body and whose computer brain was powered by energy from nuclear fusion. Atom's younger sister, Uranium, and his older brother, Cobalt, were both named after fissionable elements. Viewers and readers of *Astro Boy* saw in the robot's "love for humanity" the potential for the peaceful use of nuclear power for "justice."

Closed Coal Mines and the "America" of General Electric Village

Kainuma Hiroshi's detailed study of the area around the Fukushima power plants examines the process by which local society became dependent on nuclear power infrastructure. (Kainuma 2011) Futaba District, where the Fukushima plants are located, was formerly the poorest municipality in Fukushima Prefecture. Until the mid-twentieth century, the biggest industrial base in this region had been the Jōban coal mine, which stretched from near the site of the current Fukushima Daini plant all the way to the northern part of Ibaraki Prefecture. It rode the wave of increased coal production during the war, and enjoyed continued demand in the immediate postwar reconstruction period.

Starting in the mid-1950s the situation changed drastically. With the mediation of American oil capital, Japan began to import large volumes of cheap, efficient oil from the Middle East, leading to the "energy revolution"

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based on a shift from coal to oil. Eventually the demand for coal irreversibly declined, and the economic base of the Futaba District, long supported by the Jōban mine, began crumbling. The decline of its largest industry forced Fukushima Prefecture to find a new industrial lifeline of equal economic capacity.

At this point the prefecture decided to become an energy provider for the Tokyo metropolitan region, adopting a two-front plan to construct a dam (developed in Okutadami) and a nuclear power facility. Even though the energy shift that had driven the closure of the Jōban mine in the first place was deeply entwined with the profits of American oil capital, to escape the hardship this imposed Fukushima was compelled to follow the American lead by developing a giant dam in the style of the Tennessee Valley Authority and by constructing nuclear power facilities premised on the American ideology of nuclear energy for peaceful use. The prefecture even built a resort center modeled on Hawaii. Ironically, in every respect, the cure involved implanting "America" more deeply within the region.

Kainuma's thesis introduces some intriguing testimony about how technicians from General Electric (GE) were received in the region during construction of the Fukushima Daiichi plant with technology provided by GE. When the construction of the plant first began, a "GE village" was set up on the grounds of the plant site, with houses newly built for GE employees and their families. This "village" also acquired facilities like a school, a church and a tennis court. A former Japanese employee who worked at this GE village reports that "they frequently held American-style parties, which deepened relations with the TEPCO staff and local residents who were invited." Another informant recalled: "I have great memories of home parties held during holidays like Christmas and Halloween. At the time I actually couldn't eat meat, but influenced by the parties held at the GE village I began to." (Kainuma 2011) This village was just like the housing complexes built for American troops and their families during the Occupation. As the mine headed towards closure, these facilities for the "peaceful use of nuclear power" built in a remote, industry-less part of northeastern Japan formed another site of the U.S.-Japan alliance, connected to the military bases in Okinawa, Iwakuni and Yokosuka.

Carrying an American Umbrella in the Radioactive Rain

TEPCO's response to the nuclear disaster following March 11, 2011, can only be deemed shoddy. Against the confusion of the company and the Japanese government, the nimble responses of the American armed forces and the imperial household stand out. Seeing the U.S. military and the imperial house taking the lead in responding to a crisis takes us for an instant back more than sixty years, as if history were repeating itself. Immediately after the quake occurred, President Obama announced that any assistance necessary would be given, and

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swiftly launched "Operation Tomodachi." By mid-March, the United States had dispatched nineteen naval vessels, eighteen thousand soldiers and 140 planes for relief activities.

The motivation for the American government to render such swift, large-scale assistance may well have been linked to the continued intractability of the problem of moving the Futenma base in Okinawa. Matters had deteriorated after the former Japan chief at the State Department, Kevin Maher, had offended Japanese feelings by commenting that Okinawans were "masters of manipulation and extortion." There was likely the hope that generous disaster relief would encourage the Japanese public to view the American military as a necessary presence in Japan after all. Since the United States needs Okinawa as a key component of its strategy to maintain military dominance in East Asia, it is easy to see that it would want to treat the disaster as a "national emergency" requiring military intervention and make it an opportunity to appeal generally for the utility of the U.S.-Japan alliance. However, the Americans must have been extremely irritated at the unexpectedly fragile nature of the crisis control systems of both the Japanese government and TEPCO, and have feared that the chaos might lead them to squander this rare opportunity for the alliance. In any case, the U.S. government must have doubted whether the Japanese government had the capacity for crisis management.

The citizens of Japan welcomed the rapid response of the American troops, in contrast to the bumbling Japanese government, and admired American military technology in contrast to Japan's useless "technology power." Seeing the contrast of responses, many Japanese people now have a deep-seated distrust of "authoritative" experts in the government and institutions like the University of Tokyo. By comparison the Americans appear far more trustworthy.

How could this have happened? As I mentioned earlier, "America" was the driving factor in the establishment of Fukushima and other nuclear power plants in over fifty locations across the archipelago. The occupation of Japan did not end with the San Francisco Peace Treaty. It continued throughout Japan's postwar history, becoming ever stronger, and penetrating ever deeper into Japanese society. The high-growth era of the 1960s and the celebration of its pinnacle in the Osaka Expo of 1970 were two instances of this system of power reaching criticality within the container vessel of the postwar Japanese nation-state.

Thus it was no mere coincidence that the electricity used at the Osaka Expo came from reactor number one at the Tsuruga nuclear plant. Japanese nuclear-powered electricity, born from Shōriki Matsutarō's visions, began operating in tandem with the Expo's grand opening. As GE also built the Tsuruga reactor, its construction must also have featured a GE village like the one built in Fukushima. Using the electric power generated by this GE reactor, the grounds of the Expo were lit up by the dazzling glow of countless lights; moving sidewalks and robots sprang into action, embodying the fair's motto, "human progress and harmony." About a year after the Expo's opening, Fukushima Daiichi

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began operation. Two years after that the OPEC oil shock occurred, and Japan began leaning more than ever on nuclear power in order to free itself from reliance on the unstable supply of oil.

I have already mentioned how this deepening reliance on nuclear power went hand in hand with the implementation of a cunning strategy to alter the Japanese aversion to all things nuclear, and to push the triple exposures of Hiroshima, Nagasaki and the *Lucky Dragon* into the background. At the end of the 1950s, in order to soften anti-American sentiment in Japan, the United States moved several of its bases from the mainland to Okinawa, inaugurating a dual policy of demilitarizing the former while fortifying the latter. Pro-American consciousness strengthened on the mainland from the 1960s onward as a result, while aversion to nuclear power was progressively weakened. A 1956 survey by the United States Information Service found that 60 percent of Japanese considered nuclear power a curse to humankind; by 1958, that figure had plunged to about 30 percent. (Kuznick 2011) In the throes of high economic growth, people gradually consigned Hiroshima and Nagasaki, as well as the *Lucky Dragon*, to the realm of memories past.

Nevertheless, the movement calling for the abolition of atomic and hydrogen weapons did continue through the 1960s. The battle swelled to new heights in 1968 with opposition to the arrival of a nuclear-powered aircraft carrier in Sasebo, Nagasaki. Okinawa, formerly occupied by the U.S., reverted to Japan in 1972. This simultaneously highlighted the issue of the large nuclear arsenal stationed on the U.S. bases there. On the U.S. side, awareness of the need for a strategy that would further weaken the Japanese "nuclear allergy" remained acute in this period. From the 1960s to the 1970s, the enthusiastic marketing of American nuclear energy technology to Japan was not solely for the benefit of corporations such as General Electric, but also for American military strategy.

As authors including Mark Gayn, Douglas Lummis, Katō Norihiro and Takeda Tōru have all observed, we began the "postwar era" basking in the "sunshine" of nuclear energy. Now that the postwar era has ended, we are walking in a rain of radiation carrying an American umbrella. The source of the "sunshine" was American nuclear technology, used for the dual purposes of military and peaceful pursuits. This nuclear sunshine shone throughout the Cold War and lit up the "postwar"—but eventually the sunlight turned to a black rain that poured down onto the earth of our history.

Fukushima, Kashiwazaki and Tsuruga are all remote areas where the survival of local society depends on this radioactive rain. But now that we have experienced a fourth serious radiation incident, we sense that there is something more dangerous than nuclear sunshine contained in the radioactive rain—and in order to avoid that danger, we are once again holding up the America umbrella. On the one hand, the nuclear sunshine produced any number of illusions: television and the suburban single-family home, the Osaka Expo, even Tokyo Disneyland. On the other hand, even the umbrella we are holding up to ward off the

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radioactive rain is of American manufacture. Its inner mechanisms are the technologies of surveillance and certification and the structures of crisis management, along with the high technology that global capitalism demands.

Just as the electric power generated by the reactor at the Tsuruga plant bolstered the Osaka Expo, so the energy flowing from the reactors at the Fukushima complexes surely powered the consumer culture of Tokyo from the 1970s onward—a culture that culminated in the bubble economy of the late 1980s. Flowing from the blinding lights of the Osaka fairgrounds to the neon glow of Tokyo's consumer capital, the flood of "nuclear-powered sunshine" washed the memory of three incidents of radiation exposure into the past.

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List of References

Kainuma, Hiroshi. 2011. 「フクシマ」論: 原子力ムラはなぜ生まれたのか ["Fukushima" ron: genshiryokumura wa naze umareta no ka – On Fukushima: Why Nuclear Power Was Developed]. Tokyo: Seidosha.

Kuznick, Peter. 2011. "Japan's Nuclear History in Perspective." *Bulletin of Atomic Scientists* (13 April). http://www.thebulletin.org/web-edition/features/japans-nuclear-history-perspective-eisenhower-and-atoms-war-and-peace (accessed December 21, 2011).

Sano, Shinichi. 1994. 巨怪伝: 正力松太郎と影武者たちの一世紀 [Kyokaiden: Shōriki Matsutarō to kagemushatachi no isseiki – Monstrous Legend: The Century of Shōriki Matsutarō and His Shadow Warriors]. Tokyo: Bungei Shunjū.

Takeda, Tōru. 2002. 「核」論: 鉄腕アトムと原発事故のあいだ ["Kaku" ron: Tetsuwan Atomu to genpatsu jiko no aida – Theory of the Nuclear: The Space Between Astro Boy and Nuclear Power Plant Accidents]. Tokyo: Keisō Shobō.

Yoshida, Takafumi. 原子力と日本人 元首相・中曽根康弘さん。" [Genshiryoku to Nihonjin moto Shushō: Nakasone Yasuhiro-san - Nuclear Power and the Japanese: Interview with Former President Nakasone Yasuhiro] *Asahi shinbun*. 26 April 2011.

Yoshimi, Shun'ya. 2005. 万博幻想: 戦後政治の呪縛 [Banpaku gensō: sengo seiji no jubaku – The Illusion of the World Expo: The Spellbinding Effect of Postwar Politics]. Tokyo: Chikuma Shobō.

Further References

A brief list of some other useful scholarship, primarily in English, on (I) nuclear power in Japan and (II) Hiroshima and Nagasaki.

https://doi.org/10.1017/S0021911812000046 Published online by Cambridge University Press

I.

Aldrich, Daniel. 2008. *Site Fights: Divisive Facilities and Civil Society in Japan and the West*. Ithaca, N.Y.: Cornell University Press.

Arima, Tetsuo. 2008. 原発・正力・CIA: 機密文書で読む昭和裏面史 [Genpatsu Shōriki CIA: kimitsu bunsho de yomu Shōwa rimenshi - Nuclear Power, Shōriki and the CIA: Reading The Shōwa Period's Secret History From Classified Documents] Tokyo: Shinchōsha.

Imai, Ryūkichi. 1070. "Japan and the Nuclear Age." *Bulletin of Atomic Scientists* (June):35–9.

Low, Morris. 2005. *Science and the Building of a New Japan*. New York: Palgrave.

Yoshioka, Hitoshi. 2005. "Forming a Nuclear Regime and Introducing Commercial Reactors" and "Nuclear Power Research and the Scientists' Role." *A Social History of Science and Technology in Contemporary Japan: Road to Self-reliance, 1952–59*. Eds. Shigeru Nakayama, Kunio Gotō, and Hitoshi Yoshioka, 80–124. Melbourne: Trans Pacific Press.

II.

Dower, John. 1995. "The Bombed: Hiroshimas and Nagasakis in Japanese Memory," *Diplomatic History* 19(2):275–95.

Orr, James. 2001. *The Victim as Hero: Ideologies of Peace and National Identity in Postwar Japan*. Honolulu: University of Hawai'i Press.

Yoneyama, Lisa. 1999. *Hiroshima Traces: Time, Space, and the Dialectics of Memory*. Berkeley and Los Angeles: University of California Press.

Online Resources

Teach 3.11, http://teach311.wordpress.com/volunteer/completed-annotations/ (accessed February 12, 2012).

The Asia-Pacific Journal: Japan Focus link collection about March 11, http://japanfocus.org/Japans-3.11-Earthquake-Tsunami-Atomic-Meltdown (accessed February 12, 2012).

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