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Morris Low. *Visualizing Nuclear Power in Japan: A Trip to the Reactor*. AC95 (Palgrave Studies in the History of Science and Technology.) 260 pp.. New York: Palgrave MacMillan, 2020. €83,19 (cloth); ISBN 978-3-030-47197-2, e-book available.

In the wake of the meltdown at the Fukushima Daiichi Nuclear Power Plant following the Tohoku earthquake of 11 March 2011, Japan shut down its extensive network of nuclear reactors. How could a country that had twice suffered atomic bombing so heartily embrace nuclear technology in the intervening years? Morris Low aims to explain this apparent paradox through what he calls a visual approach. Recognizing that the Japanese public's attitudes to nuclear technology were shaped through its representation, he charts how various media – from department store exhibits to film – were mobilized to make nuclear technology feel a part of everyday life.

After an initial chapter setting out Low's approach, the next two chapters address the lead up to the bombing of Hiroshima and Nagasaki, and the Allied Occupation that followed Japan's surrender. Low reminds us that the US government used atomic bombs because they calculated that their powerful visual message would pave the moral grounds for Japanese surrender. Once the war was over, however, American-led Allied Occupation authorities quickly encouraged the Japanese public to focus instead on the "peaceful" (i.e., civilian) applications of nuclear power. But not everyone was intent to move on so quickly. Despite widespread censorship, there were efforts – most strikingly by the artists Akamatsu Toshiko and Maruki Iri – to educate the public about the horrors caused by military technology in Hiroshima.

Chapters 4 and 5 explore the role of traveling Atoms for Peace and The Family of Man exhibits in countering "nuclearphobia" in Japan. The US, through its Atoms for Peace program, aimed to position itself as a global leader in civilian nuclear technology. However, the Lucky Dragon Incident of 1954 threatened to derail US ambitions. In this incident, crew aboard the eponymous fishing vessel were exposed to radioactive fallout from an American hydrogen bomb test in the Bikini Atoll. One fisherman later died and their catch of tuna, already sold, was discovered to be contaminated. For many Japanese, this represented a third nuclear attack. In the incident's aftermath exhibitions toured several locations in Japan in an attempt to cleave a distinction in the public imagination between 'peaceful' atoms and 'bad' atoms. The message was that it was possible to accept civilian nuclear power while opposing its military use.

We see in chapter 6 that that fears of nuclear technology were a recurrent topic in Japanese 1950s science-fiction films. Of course, most notable is *Gojira* (*Gozilla*, 1954), a prehistoric creature whose slumber in the ocean is disrupted by detonation of an atomic bomb, with the ensuing rampage through Tokyo an allegory of the nuclear menace.

Chapter 7 tells the story of the heated battle between the US and Britain to supply Japan's first commercial reactor. It was expected that Japan would use American technology. Instead, they plumped for a British reactor following the launch of the world's first full-scale atomic power plant at Calder Hall in 1956. The enthusiasm of the scientific and political classes was remarkable. Politician Nakasone Yasuhiro, later to become prime minister, was keen to use atomic energy to create radioactive spas and operate desalination plants, and Japanese universities competed with each other for American research reactors.

With a reactor now on Japanese soil, nuclear technology could be encountered, not just through films and exhibitions, but directly through sightseeing trips. Tōkai-mura, site of the British-made reactor, became a destination for school children, scientists, business leaders and policy makers, who all came to marvel at the harbinger of Japan's atomic age. Chapter 8 explains how talks and exhibits there

presented a “made in Japan” success story that emphasised the Japanese ownership of this technology while downplaying its origins.

Low’s chronological approach charts how initial weariness toward nuclear technology morphed into broad acceptance by the 1970s. Chapter 9 however, shows how cracks started to appear in public confidence. First, there was a sodium spill in 1995, which was declared by the Science and Technology Agency as Japan’s worst nuclear accident. Then, in 1999, a meltdown at Tōkai-mura resulted in the deaths of two workers. A poll conducted in the aftermath of the incident found that 70 percent of the Japanese public were opposed to nuclear power. Fukushima thus represented not the starting point of Japanese disenchantment with nuclear technology, but its nadir.

Low’s is a compelling narrative that shows the rich potential of a visual approach in the history of technology. However, curiously, for a book on visual representations, there are no images. As a result, much space is spent on description. Furthermore, the overwhelming focus on US (and to a lesser extent, British) influence on Japan, means that Japan’s extensive influence on nuclear development in Asia gets no coverage. Low notes that the story is still being written. An opportunity then for others to build on Low’s fascinating work.

Ruselle Meade is a lecturer in Japanese studies at Cardiff University. She researches the history of scientific and technical translation in modern Japan, and the role of language and translation in establishing scientific authority and expertise.