



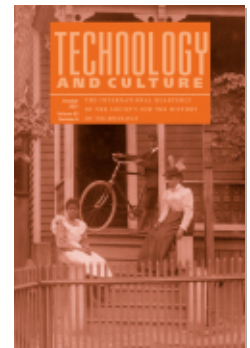
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*Pathways into and Out of Nuclear Power in Western Europe:
Austria, Denmark, Federal Republic of Germany, Italy, and
Sweden* ed. by Astrid Mignon Kirchhoff (review)

Hirofumi Utsumi

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The book certainly works as a history of (one) technology, but it's not a particularly technical history in a detailed sense. That's a fairly typical feature of cinema history; on the whole, the artistic products of the medium attract wider interest than the gears, shutters, lenses, and other elements that make them happen—not necessarily a bad thing. Christie certainly covers the significant apparatuses of Paul's career (Animatograph, Unipivot Galvanometer, Bragg-Paul Pulsator, etc.) with accuracy and understanding, but his discussion tends not to go far inside the black boxes of those devices. Researchers of the design evolution of shutter blades, sprocket wheels, and rotary-to-intermittent mechanisms won't find a lot of it here and might turn to several posts in Stephen Herbert's *Optilogue* blog, partly inspired by this book, as a starting point.

Robert Paul is written with clarity and intelligence, is easy and enjoyable to read, and mainly avoids the jargon and theorizing that still complicate some approaches to cultural history. The epilogue has a few speculative thoughts on cinematography and “the intrinsic interconnection of space and time,” and there are several recurring references to a curious project between Paul and H. G. Wells invoking *The Time Machine*, but the writing is always cautiously grounded in what can actually be proven about Paul's work (p. 257). It's mainly cinema history, certainly, but an approachable one for the non-specialist that acknowledges wider contexts and encourages the crossing of disciplinary boundaries.

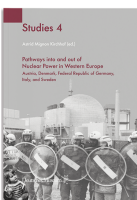
RICHARD CRANGLE

Richard Crangle is an independent researcher of historical optical media who has coedited books for the Magic Lantern Society and written articles on the lantern and early cinema. His current ongoing project is the Lucerna Magic Lantern Web Resource, lucerna.exeter.ac.uk.

Citation: Crangle, Richard. “Review of *Robert Paul and the Origins of British Cinema* by Ian Christie.” *Technology and Culture* 62, no. 4 (2021): 1282–83.

Pathways into and Out of Nuclear Power in Western Europe: Austria, Denmark, Federal Republic of Germany, Italy, and Sweden

Edited by Astrid Mignon Kirchhoff. München: Deutsches Museum Verlag, 2020. Pp. 299.



Every country has its own history of nuclear power, but we rarely get a chance to learn about the pathways into (and also out of) nuclear power in countries other than our own. We tend to believe that our own country's history of nuclear power is the same as the global one and, also, tend to envisage it within the paradigm of scientific and technological development, oblivious to the fact that our perspectives are biased, framed to a large extent by the national politics of the country we grew up in.

The book under review offers a tremendously valuable opportunity to relativize perspectives on nuclear power. Consisting of five reports on “the

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political, economic, and cultural conditions of nuclear energy politics” in five countries—Austria, Denmark, the Federal Republic of Germany, Italy, and Sweden—it was made possible by an interdisciplinary project, the History of Nuclear Energy and Society (HoNESt). The research covered a number of other countries as well, and the five were selected as they “are democracies with a market-oriented economy and a strong civil society” and also “[t]hey have all taken journeys from optimistic interest to national decisions to phase out the use of nuclear power” (p. 7).

Setting up a common framework with a focus on the events, the actors, and the public engagement that played the most crucial roles in the history of nuclear power, the book elucidates the “parallels and discrepancies” between the countries. A number of events—including Eisenhower’s “Atoms for Peace” policy, Chernobyl, and Fukushima accidents—were transnational in nature, affecting the nuclear energy politics in all countries. International and transnational connections, including those with the United States, the United Nations, and between the countries analyzed, have also been instrumental in pushing ahead the development of nuclear power plants, as well as the anti-nuclear movements and protests. The research shows, however, that the influence of such transnational events and international connections has been profoundly dependent on the internal actors—scientists, politicians, industries, and civil society—and their interactions. The national trajectories of nuclear power politics were also greatly influenced by natural and historical environments and the narratives that surrounded them: the country’s natural resources, the part it played in WWII, and its local environmental problems.

The comparative perspective of the research indicates that the pathways to nuclear power are varied and highly complex, with many elements at play. Politicians were the initial driving forces behind the euphoric science- and technology-based futuristic narratives in Denmark, Sweden, West Germany, and Austria, while in Italy, industrialists were more influential, due to the prevalence of apprehension towards the previous Fascist State and its links to the development of the nuclear bomb. Also, the development of nuclear power in the five countries—although an organized endeavor—has been in many ways accidental. The phasing out of nuclear power, being much less organized, was influenced even more by accidental occurrences. For instance, just as pro-nuclear policies were reappearing against the will of civil societies in Italy and Germany, Fukushima dealt a fatal blow to the proponents of nuclear energy.

To explain how and why these five countries with similar perceptions of the risks and benefits of nuclear power eventually phased out of it, the authors analyze the different levels of public acceptance of nuclear energy within these countries. They argue that the main issue at stake is trust: how people perceive their relationship with the various institutions, the state, and the companies comprising the industrial complex. From this point of

view, they persuasively show that informing the public transparently and giving civil society a voice in politics and policies regulating the industries builds up trust and minimizes opposition between actors. However, this does not fully explain the different levels of acceptance of nuclear energy. The role of narratives that criticize the euphoric science- and technology-based future may require investigation in further depth. An important issue is also the increasing impact of popular culture and subcultures. A more integrated approach incorporating this perspective may well add more explanatory evidence to help us understand the seemingly random pathways these countries took out of nuclear power.

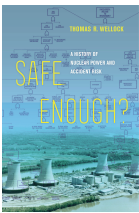
HIROFUMI UTSUMI

Hirofumi Utsumi is an associate professor of sociology, Japanese studies, and global studies at Ca' Foscari University of Venice. He published “Nuclear power plants in ‘the only A-bombed country’” in *The Nuclear Age in Popular Media* (Palgrave MacMillan, 2012). His chapter, titled “Dreams of the Vanquished,” is forthcoming in *Prophets of Computing* (ACM Press, 2021).

Citation: Utsumi, Hirofumi. “Review of *Pathways into and out of Nuclear Power in Western Europe: Austria, Denmark, Federal Republic of Germany, Italy, and Sweden* edited by Astrid Mignon Kirchhoff.” *Technology and Culture* 62, no. 4 (2021): 1283–85.

Safe Enough? A History of Nuclear Power and Accident Risk

By Thomas R. Wellock. Oakland: University of California Press, 2021.
Pp. 376.



In *Safe Enough?*, Thomas R. Wellock, the official historian of the Nuclear Regulatory Commission (NRC), traces the emergence and establishment of the NRC as an independent regulatory body in the United States, from the beginning of commercial nuclear operations until the aftermath of the Fukushima disaster. In this seventy-year-long internal history, we find that today’s NRC started as the regulatory division of the Atomic Energy Commission—an organization that had a contradictory mission: to promote and regulate nuclear energy at the same time. The NRC operates in a constellation of pro and anti-nuclear actors and has always had more enemies than friends, Wellock argues—except for a few moments in its history, when it succeeded in reaching a wider consensus on more effective regulations based on insights from decades of research and practice.

Wellock constructs the narrative around the question of how much safety is enough to protect the public, the industry, and the environment. At the heart of this search lies the development and gradual integration of probabilistic risk analysis (PRA) into regulatory practice. Originating from the aerospace industry, PRA provided a potential alternative and then later a complement to the established safety philosophy of “defense in depth.” Defense in depth relies on deterministic principles based on imagined