

Taking on Technocracy: Nuclear Power in Germany, 1945 to the Present. By Dolores Augustine. New York: Berghahn Books, 2018. Pp. xiii + 286. Cloth \$135.00. ISBN 978-1-78533-645-4.

Recent years have witnessed a resurgence of academic and popular interest in the history of nuclear energy and opposition to it in Germany, driven not least by Angela Merkel's 2011 decision to phase out nuclear power in the wake of the Fukushima disaster. Dolores Augustine's *Taking on Technocracy* examines the debates that have taken place since 1945 surrounding civil nuclear technology in East, West and united Germany. Her narrative of the importance of scientific arguments to political activism is enriched throughout by insightful analysis of gender, media, emotions, and policing.

The book's first chapters focus on perceptions of nuclear technology, safety, and science after World War II. Utopian and dystopian visions of nuclear power long coexisted in tension. On the one hand, both the American "Atoms for Peace" program and its unbranded, communist counterpart upheld visions of boundless nuclear energy fostering prosperity and social progress. On the other hand, nuclear technology never shook its associations with Hiroshima and the Bomb. Publicly, nuclear safety was often represented in gendered terms that undergirded the authority of male scientists, who supposedly protected a population embodied by images of healthy women and children. Away from public view, the "Americanization and Sovietization of science and technology" (246) manifested itself in different nuclear safety regimes in each German state. Neither had a flawless record, and both went to considerable lengths to cover up accidents. When accidents occurred, West German scientists tended to see them as arising from solvable technical problems, whereas in East Germany the Stasi tended to look for someone to blame.

The protest movement that emerged in West Germany seized upon the contested science of nuclear technology and avidly absorbed the work of critical experts. These were often easier to find abroad than at home: West German scientists were reticent in part because they depended on state employment, in part because of "habits acquired during the Nazi period" (78). Meanwhile, English-language research by critical scientists such as Alice Stewart, John Gofman, and Arthur Tamplin circulated internationally. The Federal Republic's own "counter-experts" did include some university scientists such as Jens Scheer (though he temporarily found himself barred from teaching as a result); perhaps more typical were lay experts like Holger Strohm, an engineer with "enough of a grasp of the technological issues" (83) to explain real (and imagined) technological problems to a broad audience, and Robert Jungk, the science journalist who coined the term "atomic state" (*Atomstaat*).

Subsequent chapters examine the development of anti-nuclear activism in West Germany specifically, as manifested in three cases: first, the local protests that blocked construction of a nuclear power station in Wyhl (1975); second, the confrontational demonstrations in Brokdorf (1976-77); and finally, West German reactions to the Chernobyl accident (1986). These chapters provide a fresh perspective on events through their focus on media, including not only content analysis of television broadcasts but also close reading of viewer correspondence. Though authorities accused critical media of pandering to the "emotionalism" of protesters, Augustine shows that the same could be said of Baden-Württemberg's premier, Hans Filbinger, who relentlessly played up fears that "the lights will start going out" without nuclear power (107-108). Augustine provides an informed and insightful discussion of militarized policing methods employed in Brokdorf and the heavy-handed repression of post-Chernobyl protest (including the notorious twelve-hour "kettling" of 400 protesters on Hamburg's Heiligengeistfeld), drawing on police reports and parliamentary investigative committee

papers in the process. Nor does she neglect protesters' own violence, though she concludes (as others have) that non-violent protest ultimately predominated because it was more "palatable to moderate, middle-class, and older West Germans" (152).

Opposition to nuclear power in the German Democratic Republic (GDR) could not take the same organized, open, and confrontational forms as in West Germany, but the Church-protected movement that linked ecological, peace, and human rights issues there during the 1980s likewise criticized nuclear energy. Augustine focuses on official reactions to Chernobyl, *samizdat* (self-printed) publications about "rotten reactors," and the activities of East Berlin's *Umweltbibliothek* (Ecology Library) to show how a movement developed in spite of extensive repression. Here as elsewhere, she underscores how activists framed their opposition in terms of scientific arguments rather than solely ethics or religion. Augustine also identifies convergences with the movement's West German counterpart in terms of critical attitudes towards "growth philosophy" and official experts as well as activists' pursuit of authenticity and personal commitment.

The book closes not with a ringing success story centered on Merkel's dramatic phase-out of nuclear power after Fukushima, but with a more careful discussion of the vagaries and ambiguities of Germany's energy policies since 1990. GDR reactors were quickly decommissioned, in part so as to avoid "political problems" for the Federal Republic's own energy companies (215). In 2000 and 2002, the coalition of Social Democrats and Greens hammered out agreements to phase out the rest of Germany's nuclear power stations, but Merkel canceled them upon forming a coalition with the Free Democrats in 2010. In doing so, she reinvigorated an anti-nuclear movement that no longer dominated the political agenda but which still could and did mobilize effectively, especially against waste transports to Gorleben. In the wake of the Fukushima disaster, Merkel bowed to public opinion, revisited her decision, and embraced a renewed phaseout. Though nuclear energy now appears to be decidedly on the decline in Germany, opposition to it too has waxed and waned over time. Augustine therefore argues that Germany's energy future remains an "open question," especially given the country's ambitious targets for reducing or preventing climate change.

Taking on Technocracy covers a broad range of developments in the domains of technology, policy, and protest, analyzing them with nuance in the different contexts of East and West Germany. For those wanting to understand why the issue of nuclear power has remained such an important factor in German politics for half a century or more, Dolores Augustine has delivered an excellent study of the long-running debates on the topic and their many twists and turns.

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