

Nuclear Futures in the Post-Fukushima Age



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On March 11, 2011, a magnitude 9.0 earthquake struck off the Pacific coast of Japan. One of the most powerful earthquakes ever recorded, the Tōhoku earthquake triggered a violent tsunami, with waves measuring as high as 130 feet. The tsunami engulfed Japan's eastern coastline, traveling as far as six miles inland in some areas and causing massive devastation. An estimated 20,000 people were killed. Situated directly on the coast, the Fukushima Daiichi Nuclear Power Plant was inundated by the tsunami. The plant's emergency generators shut down, leading to a failure of its cooling pumps. The three nuclear meltdowns that ensued caused hydrogen explosions and the widespread release of radioactive material into the air, water, and soil. The worst nuclear disaster since the Chernobyl meltdown in 1986, the nuclear accident in Fukushima was subsequently determined by an independent commission to have resulted from negligence on the part of the plant's operator, the Tokyo Electric Power Commission (TEPCO), which had failed to follow basic safety protocols at the Fukushima Daiichi Plant.

Less than three months after the Fukushima meltdown, Chancellor Angela Merkel announced that Germany would phase out nuclear power entirely, shutting down eight of its nuclear plants immediately, and ensuring that all seventeen will be offline by 2022. Germany's commitment to total nuclear shutdown was unequivocally a reaction to the Fukushima Daiichi disaster and constituted a notable policy reversal on the part of Merkel's conservative Christian Democrats. This radical change was not merely an executive mandate. A few days after the meltdown in Japan, more than 60,000 German protestors formed a 28-mile human chain from the southern city of Stuttgart to the nearby nuclear plant at Neckarwestheim in order to demand an immediate phase out of nuclear power in Germany. Their action was the latest in a long history of nuclear abolition protests, dating all the way back to the 1950s, which gained prominence after the introduction of nuclear power for commercial use in West Germany in the 1960s, and ultimately served as a catalyst for the founding, in 1980, of the influential Green Party. The Chernobyl disaster, which caused food and health scares in both East and West Germany due to the spread of radioactive contamination across Europe, only increased public opposition to nuclear power. Today, a majority of Germans opposes the use of nuclear energy, and 80 percent of legislators in the Bundestag voted to pass Merkel's 2011 nuclear phaseout plan.

Directly influenced by Fukushima, Germany's 2022 nuclear shutdown is only the latest instance of the intertwined nuclear histories of Japan and Germany, two national cultures whose long traditions of nuclear abolition were shaped by the bombings of Hiroshima and Nagasaki and by the legacies of World War II and the Cold War, as well as by more recent nuclear accidents.

As scholars have demonstrated, the U.S. Bravo hydrogen bomb test in 1954 not only rekindled the fearful specter of nuclear disaster—embodied in the filmic cautionary tale *Godzilla*—but also galvanized a citizen-led movement for food safety and independent scientific investigation in Japan. Similarly, initia-



German anti-nuclear protestors formed a 28-mile-long human chain between Stuttgart and the nuclear power plant at Neckarwestheim on March 12, 2011, one day after the triple disaster at Fukushima, Japan. Photo by Volker Bohn for Die Linken, courtesy of the authors.

tives challenging the normalization of "safe" civilian uses of the atom have a long history in Germany, where the successful movement to prevent the building of a nuclear power plant in the city of Wyhl in the 1970s provided a creative and highly effective model for citizen-led protests subsequently adopted by nuclear abolition groups worldwide. Both the Chernobyl and Fukushima disasters have underscored the futility of "clean up" protocols in the face of contaminated crops, livestock, waterways, and airstreams throughout Europe, in Japan, and beyond.

The striking convergences—as well as the divergent aspects—of Japan and Germany's postwar nuclear histories form the basis of our collaborative research project, *Nuclear Futures in the Post-Fukushima Age*. With its multipronged approach, including a graduate course, scholarly workshop, edited volume, and digital humanities project, *Nuclear Futures* contributes to and draws on the University of Maryland's key thematic focus on sustainability and climate adaptation, expanding on the core strength areas of environmental science and policy by developing an innovative methodology grounded in the environmental humanities. Drawing on interdisciplinary conjunctions of environmental studies, ecocriticism, cultural history, and geography, among others, the environmental humanities aims to shed light on the relationships between humans and the environment, and nature and culture, while also contributing to our awareness and understanding of the stakes of environmental justice today. At a moment when public discourse casts doubt on the objectivity of science, and when elected officials dispute the facts of climate change, the humanities must play a renewed role

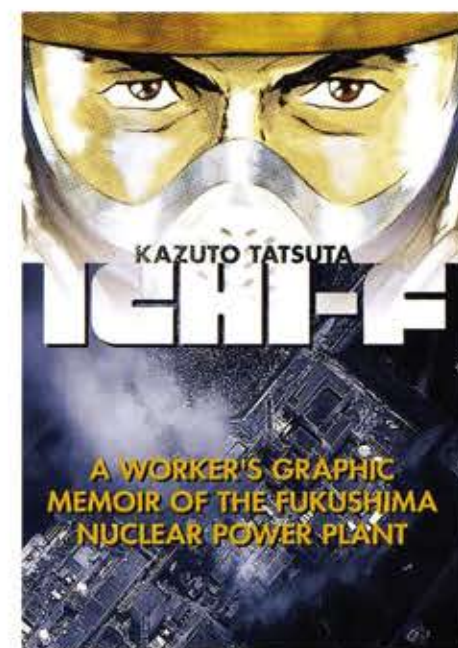
in demonstrating the lessons of history, creating connections between the past and present, illustrating the importance of critical thinking, and fostering imaginative solutions to the problems of our time. In this vein, our work facilitates productive dialogue on and new understandings of environmental

activism, scientific commitments, and artistic engagement with atomic issues in the present moment. Leveraging the unique atomic histories of Germany and Japan, we emphasize the lessons and legacies of past nuclear events for combatting environmental degradation and conceptualizing notions of sustainability and environmental and human futures.

Given that environmental humanities is a relatively new and dynamic field of study that has developed largely within the Anglo-American context, there is considerable room for pushing the geographical, temporal, cultural, and linguistic scope of previous scholarship. *Nuclear Futures* employs a comparative methodology, focusing on Germany and Japan's postwar and contemporary periods, to analyze a wide range of cultural production, including fiction, film, video, manga, music, animation, and oral histories, as well as civil environmental movements and advocacy. What emerges are insights into how ordinary citizens document and share the lived experience of nuclear disasters, sustain networks of caring and connection for bodies and communities in distress, question received notions of "peaceful" uses of nuclear power, and pose alternative priorities and pathways out of the thicket of rationalizations presented by political actors and nuclear industry proponents. Fruitful pairings, such as Yoko Ota's disjointed and disorienting *City of Corpses* (1948)—penned on scraps from shoji doors and toilet paper in the immediate aftermath of the Hiroshima bombing—and Christa Wolf's interweaving of lyrical reflection and reportage in her response to Chernobyl, *Accident: A Day's News* (1987), reveal the inextricable link between

form and content and the challenges of constructing tidy understandings of unfathomable catastrophes. The significant role played by narrative in making unimaginable disasters visible and in addressing trauma for those affected forms the crux of Alexander Kluge's short stories on nuclear catastrophe in the post-Holocaust era, while Natsuki Ikezawa's *Atomic Box* (2014) maps out new ethical terrain for apprehending the disturbing connections between nuclear weapons and nuclear power while questioning notions of "security" through the generic conventions of the political thriller. Likewise, generative juxtaposition can be found in Nobel-Prize-winner Svetlana Alexievich's oral histories in *Voices of Chernobyl* (1997) and the popular fictional account of an intentional community in post-disaster Chernobyl in *Baba Dunya's Last Love* (2015), by Russian-born, German-language writer Alina Bronsky, both of which probe conceptions of futurity after the collapse of mass utopia.

The intertwined cultural history of Germany and Japan is evident not only in shared attention to the philosophical and representational dilemmas of the nuclear age, but also in a range of border-crossing transnational texts that contravene the limitations of the national-cultural paradigm as they attend to the geopolitical transformations and environmental challenges of the present. Doris Dörrie's *Fukushima, Mon Amour* (2016), a German film shot on location in the exclusion zone of Fukushima, traces the encounter between Marie, a young German woman seeking to cheer up elderly victims of



The graphic memoir "Ichi-F" was published in Japan in 2014-15 and in English in 2017. Photo courtesy of the authors.

the triple disaster through the organization Clowns4Help, and Satomi, Fukushima's last geisha, who returns to her destroyed house in the prohibited area. While Marie helps Satomi clean up, the contours of time shift as both women are haunted by ghosts of the past and spectres of unforeseen futures. The post-monolingual texts of Yoko Tawada, a Japanese-born author who writes on nuclear disasters in both Japanese

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