

11. Listening to the Radiogenic Community Archive

Sarah Fox

Sarah Fox, author of *Downwind: A People's History of the Nuclear West* (University of Nebraska Press 2014, paperback 2018) is currently a PhD student in history at the University of British Columbia, where she is beginning research under Coll Thrush's supervision into histories of environmental restoration projects in the Pacific Northwest Salish Sea region. Fox holds a Master's degree in History and Folklore from Utah State University and a Bachelors degree in American Studies from the Evergreen State College.

sarahalisabethfox@gmail.com

Archival records of nuclear weapons and power development generated by governments, industries and scientific researchers are important sites for scholarly inquiry in multiple fields. They hold material relevant to historians of science, labour, environment and the body, as well as scholars of Indigenous Studies, Geography, International Studies and Health Physics. Post-Cold War declassification has made a vast number of these records available, yet these newly visible archives remain layered with the manipulations, omissions, assumptions and agendas of nuclear industry overseers.¹ While conscientious researchers can identify many of these shortcomings in these so-called official archives, achieving a fuller understanding of the impacts of nuclear technology requires attentiveness to unconventional archives and alternative epistemologies; in particular, those oral narratives and records maintained by ordinary people living in communities impacted by radiation from nuclear activities.

Since the dawn of the so-called atomic age, Indigenous and rural communities and predominantly working-class bodies have shouldered the health and environmental legacies of

nuclear production, a result of the colonial calculations of nuclear states worldwide.²

Environmental anthropologist Barbara Rose Johnston observes:

Actions taken in the name of national security have profoundly shaped both the biophysical nature and sociocultural identity of host communities, creating what might be best termed radiogenic communities. A radiogenic community is produced by the process of radioactive decay: its members are people whose lives have been profoundly affected and altered by a hazardous, invisible threat, where the fear of nuclear contamination and the personal health and intergenerational effects from exposure color all aspects of social, cultural, economic, and psychological well-being. Some radiogenic communities are the end result of a geographic location... Others are formed by occupational exposure.³

As I argue in my 2014 book, *Downwind*,⁴ residents of these communities draw on varied and intersecting ways of knowing – about environment, food production, health and disease, and place-based history – to make sense of their proximity to nuclear risk. These forms of local knowledge emerge from constellations of relationships and community connections, many of them informed by practices of care: for crops and livestock, for family members, and for the environments that hold these bodies. In many radiogenic communities, economic relationships with nuclear sites or stigma around health issues and radiation exposure have made it unpopular and socially risky to speak out about these topics. Those local people who are willing to share their experiences, documentation and observations can offer critically important evidence about radiation health and environmental changes near nuclear sites, illuminating phenomena that may not be represented in official archives.⁵

In my talk for the 2019 “Future of Nuclear Studies” symposium, I utilized participant observation and oral history methodologies in tandem with traditional archival research to historicize the curious persistence of the Richland High School mushroom cloud mascot, near

the heavily contaminated Hanford plutonium production site in eastern Washington State. In this community, local traditions of pro-nuclear rhetoric and risk obfuscation on the part of government and industry overseers date back to the construction of the Hanford site in 1943. These tendencies have contributed to a flattened understanding among Richland residents of the extent to which their own bodies were made vulnerable in the course of nuclear weapons production.⁶

In 2018, Nagasaki *hibakusha* (atomic bomb survivor) Mitsugi Moriguchi visited Richland and observed the mascot for himself. A local high school student told him she thought the mushroom cloud mascot was important, “because it helps us to remember the past.” Through his translator, Dr Norma Field, Moriguchi suggested that placing an image of the mushroom cloud on the floor of the high school gymnasium and hallways was like inviting students to tread on the graves of those who died in the bombing. Reflecting on the student’s statement later that day, Moriguchi stated: “She said that it’s a good thing that we have that image of the mushroom cloud so that we don’t forget it, but that’s not sufficient knowledge. I want them to learn, from materials, from historical writings... nuclear weapons have not benefitted human beings.”⁷ In order to illuminate the ways local people had been put at risk by Hanford operations, I shared the story of Muriel Sears, a Richland resident, mother of three, and Hanford worker, who ingested radioactive promethium-laced orange juice as part of a study by her employer in the mid-1960s; decades later, she developed serious health problems that contributed to her death.

My conference paper concluded that:

Stripped of its context and plastered onto high school football helmets, the mushroom cloud represents nuclearism as an event contained in time and space, rather than its actuality: a disorderly, ongoing, global dispersion of indefinite toxicity across geographies, genomes, and generations. Mushroom cloud iconography overlooks the cost of over seventy-five years of slow and mobile violence. It is imperative that we consider the deployment of the mushroom cloud through the gaze of radiation-impacted people like Muriel Sears and Mitsugi Moriguchi, for whom radiation exposure is a lived experience.⁸

Increasingly, university archives are recognizing the value of ordinary people's stories of radiation exposure, many of which are being digitized and made available online, allowing scholars worldwide to gain critically important insights about nuclearism's material and cultural effects. The Downwinders of Utah Archive, hosted online by University of Utah's Marriott Library, is an excellent example. Records from legal cases and public hearings – like *Irene Allen et al. v. United States* and the 1992 World Uranium Hearings in Salzburg – are rich sources of local historical, ecological and health impact knowledge.⁹

Knowledge-holders in radiogenic communities often live at the intersection of multiple marginalized identities, and most are dealing with chronic health problems in their own bodies or in the bodies of loved ones. Many Indigenous people impacted by radiation exposure must also grapple with the ongoing trauma of displacement from ancestral lands seized for nuclear production or waste disposal, the often irrevocable contamination of traditional food and water sources, and the loss of community knowledge-holders to premature death from health conditions potentially related to radiation-exposure. For Indigenous nations who have been resisting genocide for centuries, these impacts are exponentially devastating. Nuclear scholars who work primarily in official archives must be cognizant of these legacies, which are often hidden from their view. Researchers working in the radiogenic community archive must be

cautious about engaging in damage-centered research and attentive to community concerns and stated needs.¹⁰ Both forms of record are vital to the field of nuclear studies.



Figure 10. Nagasaki *hibakusha* Mitsugi Moriguchi speaking to a Richland High School student about the “bombers” mascot while Dr. Norma Field translates. Photo taken by the author (Sarah Fox).



Figure 11. The mushroom cloud logo on the floor of the Richland High School’s Arthur Dawald Gymnasium. Photo taken by the author (Sarah Fox).

¹ I address problems of accuracy and ethics in official records relating to nuclear development in *Downwind: A People’s History of the Nuclear West* (Lincoln: University of Nebraska Press, 2014). These topics also receive careful attention in Barbara Rose Johnston, *Half-Lives and Half Truths: Confronting the Radioactive Legacies of the Cold War*, (Santa Fe: School for Advanced Research Press, 2007). For analysis of the global extent of health and environmental effects due to nuclearism see Arjun Makhijani, Howard Hu, and Katherine Yih, *Nuclear Wastelands: A Global Guide to Nuclear Weapons Production and its Health and Environmental Effects*, (Cambridge: MIT Press, 1995, 2000).

² Valerie Kuletz offers a cogent analysis of nuclear colonialism in *The Tainted Desert: Environmental and Social Ruin in the American West* (New York: Routledge, 1998), xv. For additional theory and analysis regarding the intersection of nuclearism and colonialism, see Traci Brynne Voyles, *Wastelanding: Legacies of Uranium Mining in Navajo Country* (Minneapolis: University of Minnesota Press, 2015); Winona LaDuke, Ward Churchill, “Native America: The Political Economy of Radioactive Colonialism,” *The Journal of Ethnic Studies* 13,

no. 3 (Fall 1985): 107-132; Robert Jacobs, "Nuclear Conquistadors: Military Colonialism in Nuclear Test Site Selection during the Cold War," *Asian Journal of Peacebuilding* 1, no. 2 (November 2013): 155-177; Danielle Endres, "The Rhetoric of Nuclear Colonialism: Rhetorical Exclusion of American Indian Arguments in the Yucca Mountain Nuclear Waste Siting Decision," *Communication and Critical Studies* 6, no. 1 (March 2009): 39-60; and Gabrielle Hecht, *Being Nuclear: Africans and the Global Uranium Trade* (Cambridge: MIT Press, 2012).

³ Barbara Rose Johnston, "Half-Lives and Half-Truths: Confronting the Radioactive Legacies of the Cold War," in Johnston, ed., *Half-Lives and Half-Truths: Confronting the Radioactive Legacies of the Cold War* (Santa Fe: School for Advanced Research Press, 2007), 2.

⁴ Sarah Fox, *Downwind: A People's History of the Nuclear West*, (University of Nebraska Press, 2014, <http://www.downwindhistory.com>), Board member of Consequences of Radiation Exposure-Hanford (<https://www.corehanford.org>), PhD student in History, University of British Columbia.

⁵ I discuss community hostility toward individuals who speak out about radiation health effects in *Downwind*; see 208-9. See also Robert Jacobs, "The Radiation that Makes People Invisible: A Global Hibakusha Perspective," *Asia Pacific Journal* 12, no. 21 (July 28, 2014), online at <https://apjif.org/2014/12/31/Robert-Jacobs/4157/article.html> (accessed September 10, 2018). In an August 6, 2020 panel "Managing Nuclear Memory" held on the 75th anniversary of the U.S. bombing of Hiroshima, Dr. Yuki Miyamoto and Dr. Norma Field reflected on the parallels between Richland, Washington, impacted by US plutonium production, and communities impacted by radiation from the 2011 Fukushima accident. Dr. Field asserted that at both sites: "Silence [about radiation impacts] is shaping everyday life." (Author's notes).

⁶ See CM Grossman, WE Morton, RH Nussbaum, "Hypothyroidism and Spontaneous Abortions among Hanford, Washington Downwinders," *Archives of Environmental Health* 51, no. 3 (1996): 175-76; CM Grossman, WE Morton, RH Nussbaum, "Reproductive Outcomes after Radiation Exposure, Correspondence," *Epidemiology* 10 (1990): 202-203; JR Goldsmith, CM Grossman, WE Morton, RH Nussbaum, et al., "Juvenile Hypothyroidism Among Two Populations Exposed to Radioiodine," *Environmental Health Perspectives* 107 (1999): 303-8; CM Grossman, RH Nussbaum, FD Nussbaum, "Thyrotoxicosis Among Hanford, Washington Downwinders: A Community-Based Survey," *Archives of Environmental Health* 57, issue no.1 (2002): 9-15; CM Grossman, RH Nussbaum, FD Nussbaum, "Cancers Among Residents Downwind of the Hanford, Washington, Plutonium Production Facility," *Archives of Environmental Health* 58, no. 5 (2003): 267-74; RH Nussbaum, CM Grossman, "Environmental Contamination and Health Studies: Conflicts of Interest and Reasons for Community-Based Participatory Studies, Editorial," *Archives of Environmental Health* 58, no. 5 (2003): 261-62.

⁷ Mitsugi Moriguchi through translator Dr. Norma Field, Richland, Washington, March 8, 2018, Author's notes. Translation verified in email from Norma Field to Sarah Fox, September 8, 2020.

⁸ Sarah Fox, "Rooting for the Bombers: Commemoration, Forgetting, and Ways of Knowing in Richland, Washington," presented at *The Future of Nuclear Studies*, Green College, University of British Columbia, Vancouver, June 3, 2019.

⁹ The *Irene Allen et al. v. United States* case was filed on August 30, 1979, representing plaintiffs from Utah, Arizona, and Nevada who believed their health problems were connected to atmospheric nuclear testing in Nevada. I discuss this case in *Downwind*; see p. 13 and 192-5. *Irene Allen et al. v. United States*, No. c79-0515-j, United States District Court for the District of Utah, Central Division, Salt Lake City. 588 F Supp. 247 (1984). The World Uranium Hearings in 1992 brought together Indigenous activists from around the world to testify to the environmental and health effects of uranium exposure. World Uranium Hearings, Salzburg, Austria, September 16, 1992. See testimonies at <http://www.ratical.org/radiation/WorldUraniumHearing> (accessed July 15, 2020). Downwinders of Utah Archive: <https://lib.utah.edu/services/geospatial/downwinders/> (accessed July 15, 2020).

¹⁰ See Eve Tuck, "Suspending Damage: A Letter to Communities," *Harvard Educational Review* 79, no. 3 (Fall 2009): 409-427. For instructive examples of scholarship which attends carefully to the knowledge and accounts of radiogenic communities, see works cited in note 2, as well as: Doug Brugge, Timothy Benally, and Esther Yazzie Lewis, eds, *The Navajo People and Uranium Mining* (Albuquerque: University of New Mexico Press, 2006); Robert Jacobs, "The Radiation that Makes People Invisible: A Global Hibakusha Perspective," *The Asia-Pacific Journal*, 12, no. 31 (July 2014), online at <https://apjff.org/2014/12/31/Robert-Jacobs/4157/article.html>; Traci Brynne Voyles, *Wastelanding: Legacies of Uranium Mining in Navajo Country* (Minneapolis: University of Minnesota Press, 2015); Rudi H. Nussbaum, Patricia P. Hoover, Charles M. Grossman and Fred D. Nussbaum, "Community-Based Participatory Health Survey of Hanford, WA, Downwinders: A model for Citizen Empowerment," *Society and Natural Resources*, 17, no. 6, (August 2010): 547-559. See also Linda Richard's chapter 13 on Hanford in Washington State, in this volume.