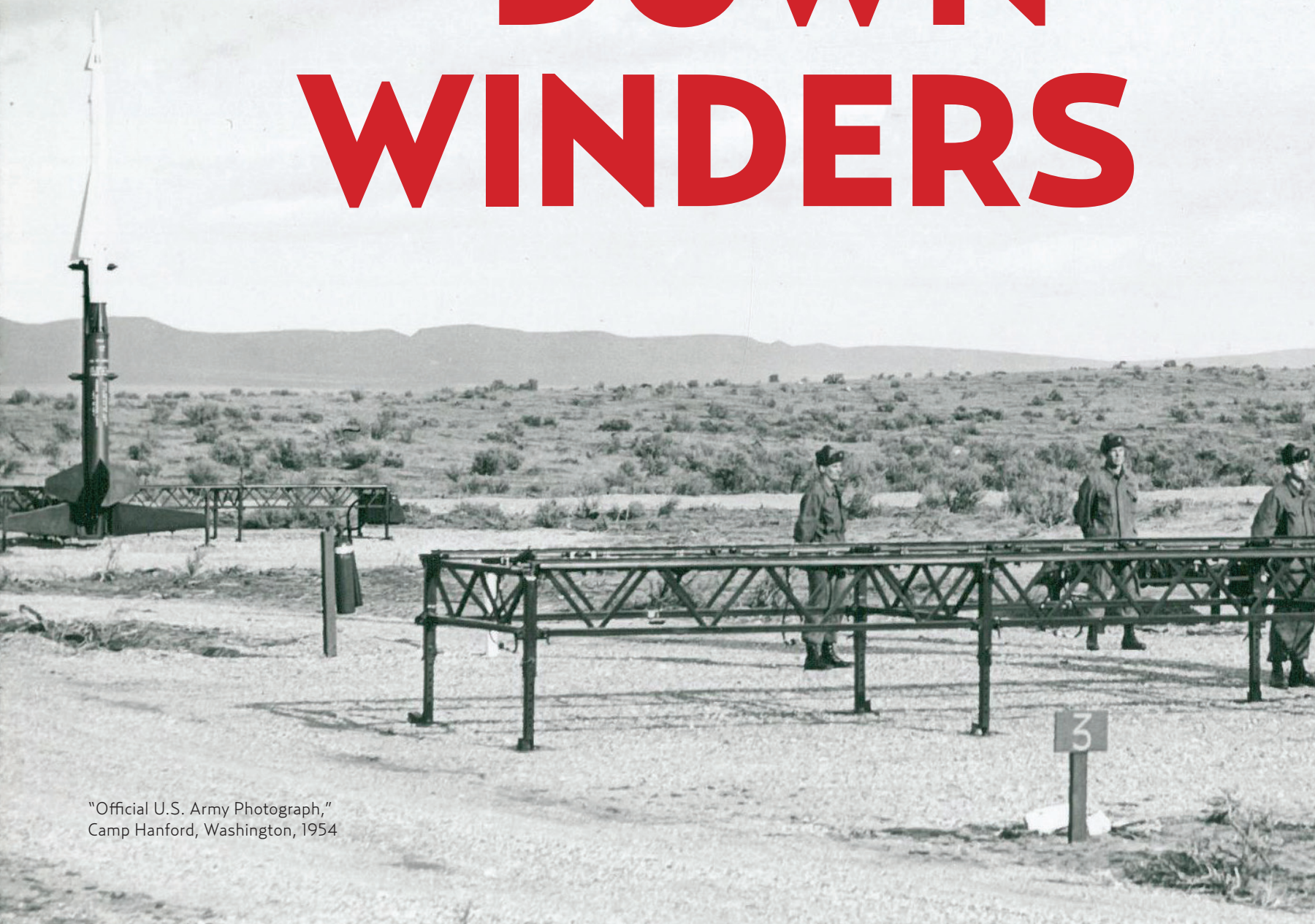
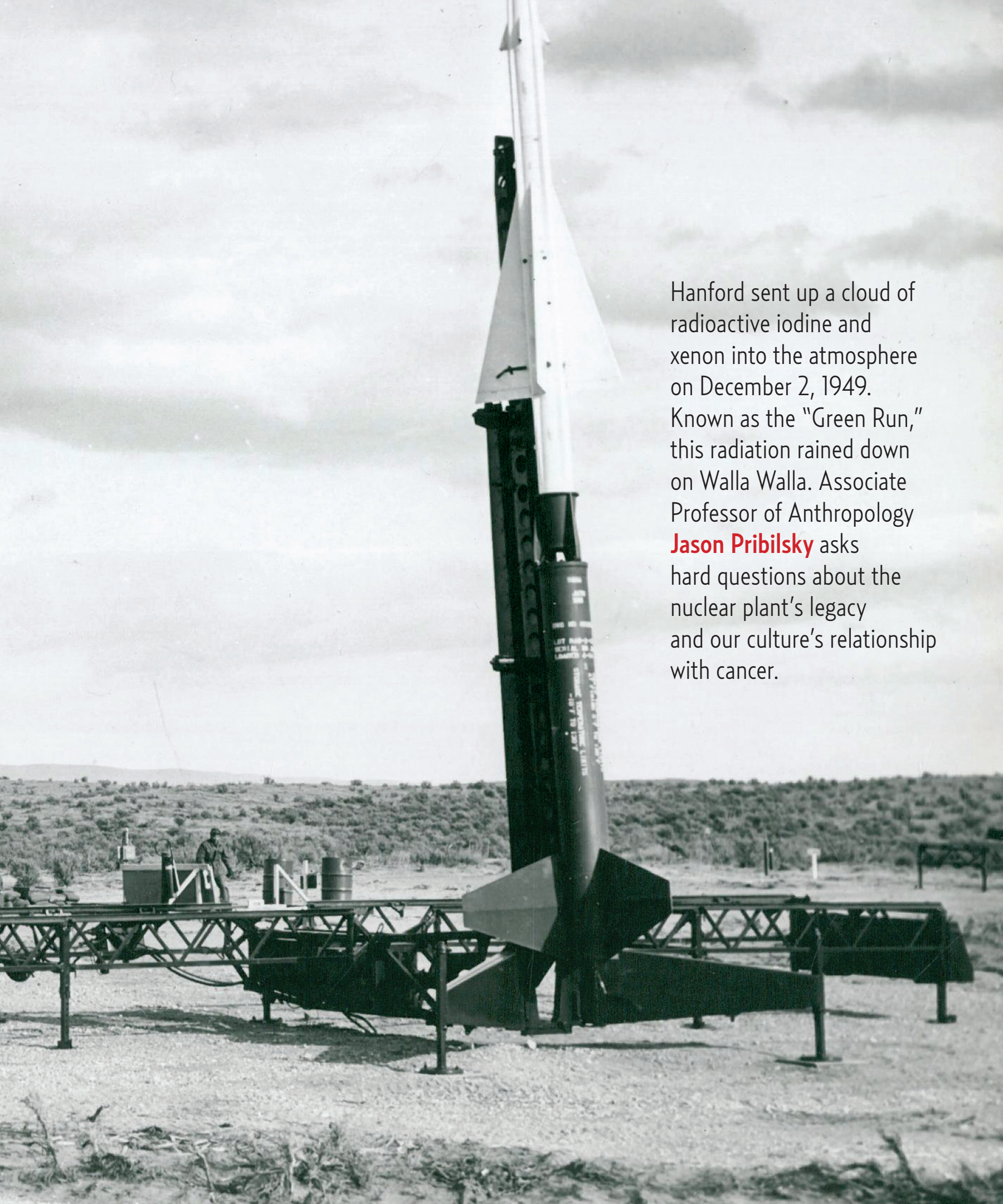


# THE DOWN- WINDERS



"Official U.S. Army Photograph,"  
Camp Hanford, Washington, 1954





Hanford sent up a cloud of radioactive iodine and xenon into the atmosphere on December 2, 1949. Known as the "Green Run," this radiation rained down on Walla Walla. Associate Professor of Anthropology **Jason Pribilsky** asks hard questions about the nuclear plant's legacy and our culture's relationship with cancer.



**B**y the time classes ended and **June Casey** (née Stark) '52 was heading home to The Dalles, Oregon, for winter break in December 1949, her body was in distress. Upon seeing her daughter, June's mother remarked that she looked "as if she had aged 50 years."

June felt as much. She was overcome with fatigue and chills; her hair was thinning and soon would fall out in clumps. A family doctor light-heartedly dismissed her ailments as the product of "studying too hard" at Whitman. Another physician, responding less nonchalantly, diagnosed her with hypothyroidism—the most extreme case he had ever seen.

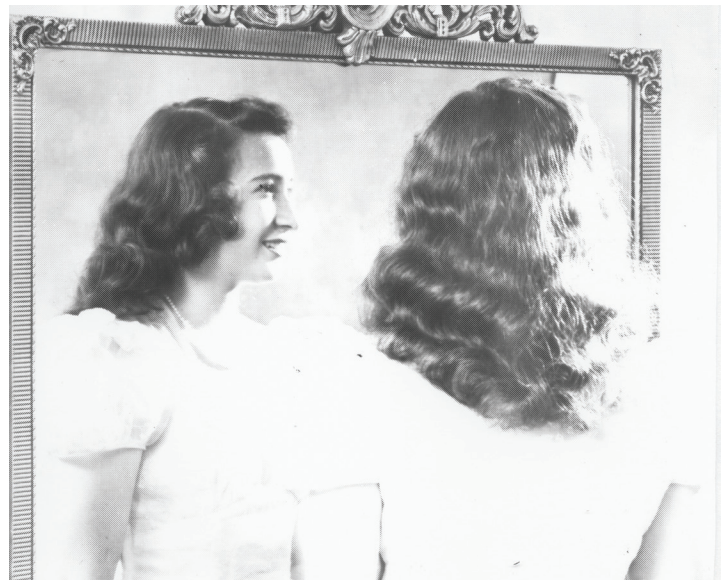
June returned to Whitman to finish out the year, yet later transferred to the University of Washington. By the time of her graduation in 1952, she would be permanently on thyroid medication and concealing her baldness under a wig. Over the coming years, her health problems would cascade: tumors in various organs, aggressive skin and breast cancers, esophageal complications that made it difficult to keep food down and a degenerative spine disorder. Despite constant fatigue, June pursued her passion to teach music, married and did volunteer work for her local symphony and art museum. After a stillbirth and a miscarriage, she successfully gave birth to a son, and left her job to raise her family. Aside from a nagging coincidence that her Whitman roommate had also experienced reproductive complications and a sorority sister gave birth to a child with no hands, she could find few discernable patterns to explain her health problems.

Indeed, like many people burdened with chronic disease, June figured she had been just dealt a lousy hand. That narrative would all change in spring 1986, however, when she came across reports in the *Spokesman-Review* that detailed a long history of radiation releases from the Hanford Nuclear Reservation just 70 miles west of Walla Walla. Through a Freedom of Information Act request, journalist Karen Dorne Steele had come to possess a trove of once classified information, largely complete and unredacted, chronicling a series of intentional radiation release experiments on the reservation beginning in the late 1940s. Of paramount interest to June was the description of the secret release known simply—and ironically—as the "Green Run." Throughout the night of December 2, 1949, around the time June started to come down with symptoms, Hanford engineers sent up at least 7,000 curies of radioactive iodine and xenon into the atmosphere.

Their experiment had all the makings of Cold War high drama. As detailed in Department of Defense and Air Force declassified reports, the goal was to simulate production capabilities of one of the Soviet Union's secret plutonium processing plants. Earlier in the year, U.S. reconnaissance revealed that the Soviets had detonated their first atomic bomb in September of 1949. Tracking the radioactive material across eastern Washington, Hanford engineers hoped to ascertain the scope of Soviet nuclear production by comparing their release samples with those collected covertly on the borderlands of the U.S.S.R. To minimize radiation exposure, the experiment needed weather conditions devoid of rain or wind, but the Hanford engineers were wrong in their climate predictions. Sporadic winds pushed the radioactive plume further south and east, toward Walla Walla, and rains across the region settled radioiodine and xenon across vegetation, waterways and farm animals. Whitman was directly in the path of the fallout.

The release was thousands of times more than that in the Three Mile Island nuclear accident and almost double what engineers intended.

I came across June Casey's story while working on details of a course I teach called *Malignant Cultures: Anthropologies of Cancer*. The class



June Stark at age 17, 1948

explores various social, cultural and political dimensions of cancer causation, treatment and patient experience both in the U.S. and globally. In addition to a reading and writing seminar, the course includes a community-based, experiential learning component aimed at getting students to confront the lived realities of cancer beyond the classroom. In the course's first iteration in 2012, students partnered with the local Providence Hospital's Cancer Center, an urgent care clinic for uninsured patients, and the Latino farm labor camp to investigate the challenges of preventing and treating cancer in rural eastern Washington. This time around, the community engagement component focused exclusively on environmental factors in cancer causation with a special emphasis on the ongoing efforts of the "Hanford Downwinders," a diverse group of claimants who trace their cancers, reproductive issues and other health conditions to Hanford's legacy of exposure.

Through her conviction that the toxic releases of the Green Run were responsible for the majority of her health problems, June Casey became a tireless Downwinder activist, a late-in-life career that included extensive world travel and appearances in high profile media venues to warn of the dangers and risks of nuclear energy and weapons production.

As an anthropologist—and not a biomedical cancer researcher or even an epidemiologist—my starting point for the study of environmental factors in cancer is not the establishment of causation, but rather an exploration of the various ways sick people make meaning of their illnesses in a world where the exact causes are unclear, disputed or rejected. In the case of the Downwinders, meanings run particularly strong with entangled feelings of betrayal, conflicted patriotism and general bewilderment that, despite a bevy of facts supporting their claims, they have to date not received official acknowledgement or compensation.

An anthropological perspective also explores how people come to assume, prioritize and live with the imminent risks to their health and wellbeing. Perceptions of risk are often more akin to belief systems, working strongly on emotions and values over raw calculation. Case in point: in the cancer class, we explore the fraught relationship between our indisputably toxic environment, where scientists have identified literally hundreds of suspected carcinogens, and our ability

to socially disconnect from these realities. In my class, I often provoke students to assess their own prioritization of risks, for instance why they prioritize consuming only organic fruits and vegetables yet make little fuss over the potentially carcinogenic rare earth elements that add color and brilliance to our smartphones.

Addressing these puzzles inevitably raises issues around the epistemology of cancer research and science—how do we know that X, Y or Z caused someone's cancer? And, most often, we accept that our limited inquiries into environmental factors in cancer are a reflex of the limits of science and knowledge. Yet, in our class we also apply to these problems the lesser-known inquiry of agnotology, which is the study of what we don't know and why we don't know it. (Or, in other words, the exploration of how doubt and ignorance are socially produced.)

A starting point for this exploration begins with the simple observation that while only around 8 percent of cancers are known to be of genetic origin, unlocking the genetics of cancer has overwhelmingly become the focus that organizes research, captures headlines and stirs the elusive goal of winning the war on the disease. While exciting and path-breaking, an agnotological approach asks us to momentarily suspend our enthusiasm long enough to ask why as a society we have not marshaled similar resources to unlock cancer's proximate environmental causes despite our suspicions of their importance.

Social scientists of health have long employed the term "cognitive dissonance" to describe the radical gulf between what we might suspect is making us sick and how we live our lives. Through a variety of perspectives, students in Malignant Cultures explore how different

threadbare silk fragments of kimonos owned by Kawano's grandmothers stitched together with her own hair. "FatMan" and the other pieces were on exhibit in Maxey Museum during the month of April and into May, where the campus community and Walla Walla residents, as well as local school groups, viewed it.

The show's themes expand far beyond the confines of the topics covered in *Anthropologies of Cancer* and the exhibit served as a catalyst for other events to explore the legacy and future of Hanford. Events included a public address and classroom visit by Trisha Pritikin, a lawyer and writer who grew up the daughter of a Hanford engineer and is arguably the face of Downwinder activism. Whitman also hosted a Hanford State of Site event, organized by Columbia Riverkeepers, Hanford Challenge, Heart of America Northwest and Washington Physicians for Social Responsibility. Along with representatives from the Environmental Protection Agency and the Washington State Department of Ecology, the gathering—moderated by Assistant Professor of Sociology Alissa Corder—addressed current and future clean up efforts at the site. Capping what became known as "Atomic April," former Washington State Poet Laureate Kathleen Flenniken read from her stirring poetry volume *Plume*.

The idea for Malignant Cultures grew naturally out of similar course offerings of mine on medical anthropology and global health. Yet, in a very specific way, I designed it as a reaction to these other courses. College medical anthropology syllabi often focus on diseases and maladies that students at a school like Whitman will most likely never experience as sufferers, or as even as the loved ones of a sufferer—

## Kate Brown in her book *Plutopia* describes the Green Run's "jaundiced plume sailing over a russet landscape under an asphalt-gray sky."

societies, both present and historical, build relationships with cancer. We read ethnographic portraits of cancer in resource-poor areas, like southern Africa, where the absence of shiny, technologically-sophisticated oncology centers shifts the patient experience from the more familiar side effects of chemotherapy and endless tests and scans to an unvarnished world of the immediate pain and wounds of metastasis and the routine use of amputation. From a different perspective, environmental writer Terry Tempest Williams' meditation on her family's multigenerational experience of cancer set within a history of environmental change, *Refuge*, addresses the role of place-making in our perceptions of illness.

The central piece of the class's community engagement also aimed to bring in diverse perspectives and address issues of cognitive dissonance around cancer and health risks. Our work centered on bringing to campus a traveling exhibit called Particles on the Wall. Integrating visual art, science, poetry and historical artifacts, the show explores the toxic legacy of Hanford and its effects on communities, families and individual bodies. The brainchild of writers and artists who grew up around Hanford as well as Washington Physicians for Social Responsibility, Particles on the Wall includes pieces that run a continuum from provocative to humorous; many of the pieces grapple with contradictions of patriotism and betrayal, science and secrecy. The mounting of the show at Whitman also included the debut of a new piece by Portland-based artist Yukiyo Kawano, herself a third generation survivor of Hiroshima and Nagasaki (*Hibakusha*). Her work, "FatMan," is a scale rendering of the weapon dropped on Nagasaki, which contained a payload of plutonium enriched at Hanford. The piece is constructed from

dengue fever, Ebola, even HIV/AIDS and tuberculosis. Yet, it's a sober fact that all of my students, if they live long enough, will be burdened by cancer. Indeed, as I learn in the first days of this class, many already have personal or familial experiences with cancer as I myself have had. This basic observation demands a different kind of learning, a different sensibility and a suspension of the need to automatically find solutions. Cancer, in the words of one of the authors we read in the class, "becomes us" and makes objectively understanding it difficult.

It is the immediacy of cancer in all of our lives that makes this course a welcome challenge. I still look out my office window overlooking Ankeny and think about June Casey's story. As one can only imagine from student patterns today, the 19-year-old probably traversed campus a dozen or more times in the early days of December unaware, like everyone else in Walla Walla, of what Kate Brown in her book *Plutopia* describes as the Green Run's "jaundiced plume sailing over a russet landscape under an asphalt-gray sky." The hidden histories and effects of cancer can depress you if you let them, as can pondering the question of the broader costs of accepting the general lack of proof around environmental causes of cancer, despite serious suspicions about their relevance. However, it is my intention in this course that hard questions be accompanied by hope.

June Casey's own trajectory from homemaker to globe-trotting activist demonstrates hope. Similarly, the Particles on the Wall exhibit shows hope in its refusal to let there be only one story told about Hanford. I am unclear of what story Malignant Cultures will tell next in terms of its experiential focus, but surely it will tack between hard questions and hope.