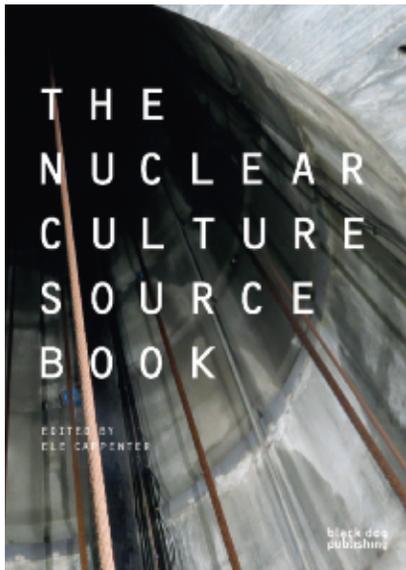


BOOK REVIEW
CARMEN VICTOR



THE NUCLEAR CULTURE SOURCE BOOK

Edited by Ele Carpenter

(London: Black Dog Publishing, 2016), 208 pages

The threat of a nuclear event has loomed since the advent of the technology in the 1940s. To be certain, many nuclear events, both deliberate and accidental, have occurred over the years. The more memorable of these events include: the 1945 bombings of Hiroshima and Nagasaki, which marked the first times atomic bombs were deployed on civilian populations; the 1979 reactor malfunction at the Three Mile Island Nuclear Generating Station near Middletown, Pennsylvania, which resulted in the release of radioactive material into the surrounding area; and the 1986 meltdown at the Chernobyl Nuclear Power Plant, which infamously caused radiation and molecular damage to the human population in proximity to the event as well as lasting environmental wreckage. There have been countless subsequent nuclear events, but perhaps the one that remains at the fore of our immediate sphere of experience is the 2011 accident at

Fukushima Daiichi Nuclear Power Plant. Following an underwater earthquake off the coast of Japan, a tsunami disabled the plant and caused a reactor meltdown, contaminating local and remote areas with radioactivity.

In response to the nuclear meltdown at Fukushima, the six member Chim↑Pom collective organized *Don't Follow the Wind*, an exhibition that takes place inside the Fukushima Exclusion Zone. Mounted on 11 March 2015, *Don't Follow the Wind* is a collaboration between the inhabitants that were displaced by the Fukushima disaster and twelve artists. Although the exhibition has a start date, it has no end date because access to the area is prohibited: the Exclusion Zone will not be safe for anywhere between 3,000 and 30,000 years, the length of time the radiation that spewed from the disabled Fukushima Nuclear Plant will take to dissipate and become inert. Therefore, the exhibition will not be accessible to the public until it is safe to visit the site. Currently, there is no official timeline for when people will be allowed to return to the area.

Don't Follow the Wind is an important reference in *The Nuclear Culture Source Book*. Divided into six sections—Nuclear Anthropocene, Nuclear Materiality, Radioactive Non-Sites, Radiological Inheritance, Nuclear Modernity, and Radiation as Hyperobject—this anthology contains many poignant and valuable essays and interviews by a range of scholars and artists, as well as artist projects, interventions, and activism.

Two works from the aforementioned exhibition that appear in *The Nuclear Culture Source Book* are particularly worth mentioning because they speak to book's broader concerns of visibility in light of the human-made conditions that simultaneously and paradoxically prevent seeing. The first is *Fukushima Texture Pack*, by Eva and Franco Mattes. In this series, the Mattes photographed floors, walls, and pavement surfaces inside the Exclusion Zone, then distributed them online for copyright-free use, mimicking the invisible spread of radiation. The zone exudes high rates of radiation; therefore, although they appear utterly banal in the Mattes' photos, the surfaces of Fukushima harbour toxic amounts of iodine-131, caesium-137, tellurium-129, strontium-90, and plutonium. All are radioactive iso-

topes invisible to the human eye. The second is Trevor Paglen's sculpture *Trinity Cube* (2015). The cube's outer layer is made from irradiated broken glass collected from the Exclusion Zone. The work's inner core is made out of trinitite, which is the mineral that was created in the Alamogordo, NM desert on 16 July 1945 when the US conducted the first atomic bomb test less than a month prior to the bombings of Hiroshima and Nagasaki. The explosion heated the desert's surface so intensely that it turned the sand into a new type of irradiated green glass. Paglen ostensibly made *Trinity Cube* by melting these two types of radioactive glass, forming them into a cube shape, and then installing the result within the Exclusion Zone as part of the exhibition. I say "ostensibly" because the materials are so toxic that any artist or tradesperson who might have manufactured the work would have been exposed to radiation during its production. Were steps taken to ensure their safety or is this work merely a symbolic one? It is difficult to discover the truth about the materiality of this object. If thieves, disaster-tourists, or urban explorers stumble on the work at Fukushima and take it home, they would expose themselves and those around them to toxic levels of radiation. *Trinity Cube* is thus an abandoned sculpture imbricated within an exclusionary, site-specific social geography.

The editor of *The Nuclear Culture Source Book*, Ele Carpenter, is a UK curator and convener of the Nuclear Culture Research Group whose work in the arts and humanities includes publications, exhibitions, field visits to nuclear sites, symposia, and roundtable discussions. Carpenter's commitment to thinking about and responding to the socio-political contexts of the nuclear economy is evident in her dialogues with industry professionals and activists alike, published in this collection. In an interview between Carpenter and anti-nuclear activist Di McDonald, for instance, the practicalities of maintaining a nuclear arsenal and the political structures controlling it are discussed. McDonald elaborates on the links between nuclear arms, global warming, and youth culture's role in lobbying governments toward action. This interview points to a broader theme of the book, which contends that it is irresponsible to build an entire

industry without solutions to manage the waste it creates, be it from accidental meltdowns, decommissioned nuclear weapons and submarines, or the spent by-products of the nuclear energy industry.

In another interview, Carpenter confers with an anonymous member of the Submarine Dismantling Project Advisory Group (SDP AG), an interdisciplinary group charged with advising the UK government on how best to dismantle and dispose of nuclear submarines decommissioned by the British Royal Navy. Carpenter presented at the SDP AG in 2011 where she met her interviewee, an experienced professional in the nuclear industry. This interview reveals the confidence of scientists vis-à-vis nuclear technology. In the opinion of the anonymous interviewee, despite nuclear accidents, natural disasters, and war, the benefits of the nuclear industry outweigh its drawbacks. Carpenter disagrees, as does the rest of *The Nuclear Culture Source Book*, which seeks to disrupt hegemonic narratives that present nuclear power as a green or clean technology.

Another issue that emerges in this interview, which is addressed throughout the book in different ways, is the problem of communicating the dangers of nuclear waste to future generations and future civilizations. Language is infinitely complex, traversing shifting geographies, cultures, and time. The span from Sumerian Cuneiform to the present is 5000 years, which raises the question: how can advanced semiotic communication be conceived of in five thousand years, or fifty-thousand? This is how long the toxicity of nuclear waste will remain a risk to organic life, since no storage system for nuclear material is completely or sufficiently impermeable. Thus, one of the key problems that arises is how we can convey the dangers of stored nuclear waste through sign systems robust enough to transcend the timespan of nuclear materiality. Revealingly, this is not much of a concern for the anonymous interviewee, who addresses the problem as more of a novelty.

The development of markers to indicate the location of buried nuclear waste is an obvious entry point for artists to engage with nuclear culture. Several innovative ideas of varying potential are put forward in *The Nuclear*

Culture Source Book. In 1984 Thomas A. Sebeok proposed an Atomic Priesthood that would safeguard information pertaining to the dangers of nuclear storage sites. Artists Robert Williams and Bryan McGovern Wilson's re-enactment of Sebeok's project is documented in *The Nuclear Culture Source Book* as an effective way to communicate information over vast expanses of time. Andy Weir conceives of microscopic 3D printed homunculi in the shape of Pazuzu, the Sumerian demon of contagion, distributed microscopically through the water supply in and around nuclear storage sites as an informational tool indicating the dangers of stored nuclear waste. The plan at the Onkalo Spent Nuclear Fuel Repository in Eurajoki, Finland is simply to have no visible markers once the repository is full. They have decided to purposefully enable the loss of institutional memory—to allow nature to run its course—obscuring the toxic dangers hidden in the granite bedrock by default.

The Nuclear Culture Source Book neatly synthesizes disparate experiences, cross-disciplinary approaches, and a wide range of artistic, intellectual, and practical perspectives as an extremely cogent resource on the contemporary conditions of nuclear experience.

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