

Susanne Kriemann: P(ech)B(lende) – Library for Radioactive Afterlife
Produced by Ernst Schering Foundation Berlin and Prefix Toronto
Published by Spector Books, ISBN: 9783959050999

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The Slow Violence of Radiological Media

Does a cameraless exposure also imply a subjectless photography? After the fact, after the usual spectrum of visibility has been evacuated from perception, what remains is a visual culture that registers as post-Anthropocene. The archive of radiation is both the most natural, cosmic occurrence and is yet an index of the Great Acceleration that emerged from the nuclear era, circa 1945. The world is illuminated and radiates in the afterglow of this era.

Radiation stands at the start of photography and of media in more ways than one. Roland Barthes argued that images work by way of emanation; the visual is a subset of a tactility that lingers on our eyes and skin in ways that exceed the mere image of a distanced object. “From a real body, which was there, proceed radiations which ultimately touch me, who am here; the duration of the transmission is insignificant; the photograph of the missing being, as Sontag says, will touch me like the delayed rays of a star.”¹ Perhaps we should read Barthes’ words literally. Uranium played a key part in the history of photography and such radioactive fragments form part of the material history of media technologies. This is a history that narrates itself through a variety of alternative chemicals and materials, reactions and counter-reactions that together form luminescence and sound. Media are chemistry, particularly uranium, which was used as photographic toner.

**The radiation that inaugurated a new era of scientifically-supported
visuality, and transparency, preceded many usual scenes of mediation.**

¹ Roland Barthes, *Camera Lucida*, Translated by Richard Howard (New York: Hill and Wang, 1981), pp. 80–81.

The radiating visual culture of the transparent body emerges with Wilhelm Conrad Röntgen's experiments. We know this technological phenomenon as an X-ray. Such a new penetrative gaze was not content to linger on the body's surface, but became a probe of sorts, one that, as Beatriz Colomina writes, articulates how bodies are already partially transparent architectural entities.² Insides are exposed, touched. Architectures are revealed from the inside out, in a development parallel to the emergence of glass architecture in its modern form. Such spaces, as mundane as they may be, converge in the modern powers of medicine, surveillance, and war.

In a famous scene in Röntgen's experiment, he moves from examining the effect of rays on objects to experimenting on his wife, Bertha Röntgen, whose words are rather eerily prescriptive of the emergence of the era of radiation: "I have seen my own death." With the nuclear era, and the total exposure of the planet as a massive event of explosive light, we have seen *everyone's* death. This horizon of collective annihilation specifically branded the Cold War years. But the discovery of radioactivity—a story well suited to chemistry classes in schools all over the world—is itself a story of the emergence of the media of radioactivity. From mineralogist Henri Becquerel's accidentally artful photographs with uranium to laboratory installations that read as artworks, such as C.T.R. Wilson's cloud chamber for visualizing particle physics and cloud structuration, one could explicate the condition of the existence of the nuclear age as one of various apparatuses of mediation. Computers are of course one part of the assemblage, but not the only one. Radiation in the form of X-ray technology makes another curious sort of appearance in the Cold War era Soviet Union: X-ray plates were also repurposed for the use of making bootleg recordings.³

Media is not at the end of the discovery of radiation, but at its beginning. Before media became domesticated as entertainment devices, it had already served as part of the epistemological function of radiation as a

² Beatriz Colomina, "X-Screens: Röntgen Architecture," (e-flux, 2015), <http://www.e-flux.com/journal/x-screens-rontgen-architecture/>, accessed April 28, 2016.

³ See The X-ray Audio Project, <https://X-rayaudio.squarespace.com/the-project/>, accessed April 28, 2016.

measurement device (as Wolfgang Ernst so often has argued).⁴ Geiger counters are the obvious reference point, but that which is measured also functions as a method of measuring in unfamiliar ways: radioactivity gives a measure of time that is not tied to our normalized categories of human time, or even necessarily to time's horizon of intelligibility. Radiation and the half-life of radioactive material have become a new temporal axis for how we count and calculate existence. This is a suitable, archival time for the future. To estimate the future through the half-life of radioactivity relates to a calculated habitability of Chernobyl, of Fukushima, of endless places to which we may or may not return. In such sites we measure not only the existence of radiating particles, but the particles themselves are the measure of the planet, before and after.

In philosopher and architectural theorist Paul Virilio's work, the connection between the nuclear and the visual becomes most clearly articulated. For Virilio, the era of the collective nuclear threat, i.e. the Cold War, is also a new era of exposure, which one can see as a massive expansion of the possibilities for understanding most bodies as transparent. As sources of light, and exposure, radiating media shifts across scales from minuscule objects to planetary dimensions. Virilio writes that the nuclear era is also one of "the new opto-electronic arsenal, which ranges from remote medical detection devices, probing our 'hearts and loins' in real time, to global remote surveillance (from the street-corner camera to the whole panoply of orbital satellites), with the promised emergence of the cyber-circus still to come."⁵

More specifically, nuclear research was linked with research about the weather and its fluctuating patterns—even modelling its behaviour as a complex, interlocked system. Besides meteorology, many scientific disciplines that were interested in the planetary condition were essential for the Cold War period, where the seemingly artificial—technologies of nuclear power and destruction—and the natural—the earth—were

⁴ Wolfgang Ernst, *Digital Memory and the Archive*, Edited and with an Introduction by Jussi Parikka (Minneapolis: University of Minnesota Press, 2013).

⁵ Paul Virilio, *The Information Bomb: Radical Thinkers*, Translated by Chris Turner (London: Verso, 2005), p. 29.

inherently and intimately tied to each other: “geodesy (for accurate mapping and missile guidance), oceanography (for submarine and naval warfare), seismology (for detecting nuclear tests), climatology (for anticipating likely conditions at potential sites of conflict), and weather forecasting itself.”⁶

Such technologies of knowledge and visual practice were, on a larger scale, not perhaps as visible as we might imagine. We usually think of visuality as that which lends itself to the human eye in the luminescence of an object, not as something connected to the wider transparency of the planetary. As Colomina hints, already since the Röntgen era, this sort of radiation was also the radiation of the surveillance apparatus, a visual practice, and metaphor, for that which makes things visible.

So, what else besides the surveillance of people are we dealing with? The earth, as an object, as a resource. Understanding the earth as an accumulation of resources was a necessary support for the radioactive era. What were likewise necessary, of course, were the supply routes and logistical arrangements that enabled materials, not least uranium, to be available for use. What if this was always already a secret, parallel history of the earth, of its technologies and technological understanding? Consider Sean Cubitt’s words: “The extraction of precious metals needed to build telecommunications infrastructures and devices runs parallel to the extraction of energy sources, including oil, uranium, and, in many instances, hydroelectric schemes, all of which have tended to cluster in regions previously thought desolate enough to be turned into reservations for the unwanted indigenous populations of settler colonialism.”⁷ It is the systematic mapping of the planet for its resources: food, water, minerals, energy, uranium.

A radioactive afterlife seems to be a sort of measure for a future, post-human archive. With her *Library for Radioactive Afterlife* however

⁶ Paul N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge, MA: The MIT Press, 2010), p. 189.

⁷ Sean Cubitt, “Decolonizing Ecomedia,” *Cultural Politics*, Volume 10, Issue 3 (Durham, NC: Duke University Press, 2014: pp. 275–86), p. 281.

Susanne Kriemann asks to what degree that afterlife may already exist. Consider, instead of a speculative futurism, a post-human contemporary. The Gulf War and subsequent military actions in Iraq saw a live battlefield make use of depleted American and British uranium ammunition. While chemical warfare is banned by way of international conventions, the use of such depleted but extremely toxic weapons is an active part of war, and what follows. It introduces a new timescale for the archival, extensive, and continuing war that Rob Nixon aptly calls “slow violence:” the pollution of humans, animals, plants and the soil. For example, in Iraq this made an impact by way of direct but slowly emerging symptoms, as well as by way of new political economic implications, such as the unavailability of local agricultural produce because of the toxic residue left behind. This also provided a new market for the American and International agricultural business corporations.

The mediations of technological warfare are, indeed, archival: “Depleted uranium (DU) possesses a durability beyond our comprehension: it had a radioactive half-life of 4.51 billion years.”⁸ New kinds of rays, but also the harnessing of old kinds of chemical reactions, have produced a new sort of time, that of a toxic era. We carry with us that time as a different type of archival memory, not one read by human eyes and written in the usual form of normal library content, but one that is measured by the rattle of the Geiger machine as much as by the sedimentation of various toxins of the 20th century, which our bodies literally carry with them.

⁸ Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2011), p. 201.