

HISTSCI 131V: Environments in Crisis

Dr. Evan Hepler-Smith

Fall 2017

Monday, 2-4pm, Science Center 469

Office Hours: Tuesday 10:30am-2:30pm & by appointment, Science Center 255

Email: hepler@fas.harvard.edu

Our understanding of the relationship between humans and the environment has been forged in moments of crisis: natural and human-made disasters, technological failures, political disputes, scientific controversies. This course addresses science, technology, and the environment in historical perspective through focused studies of environments in crisis. We will learn to sort out the complex dynamics of nature, knowledge, ethics, and power wrapped up in environmental crises, and how understandings of environmental crisis both shape and are shaped by specific social, cultural, and political contexts (including our own).



View of Donora, Pennsylvania, around the time of the fatal smog of 1948.

This course is not an exhaustive survey. Instead, we will take a close look at a collection of episodes that have become particularly significant historical models for thinking about environments in crisis. We will address such questions as: How have observers in different times and places distinguished natural processes from unnatural interventions in the environment? What is “natural” about natural disasters? How do war and politics relate to environmental crises? What has made environmental crises visible or invisible to those affected by these crises, and to scientists and politicians? How have the environmental values – moral and economic – changed during moments of crisis?

This course has three general objectives. First, we will learn about some past crises that can help sharpen our perspective on the relationship between science, technology, and the environment in the present day. Second, we will learn about the specific circumstances in which past observers drew lessons from environments in crisis. Third, we will learn how analogies to past spills, explosions, extinctions, laws, and controversies shaped the understanding of later episodes in environmental science and politics.

Grading: Participation 50%, Final Project Proposal 10%, Final Project 40%

Participation: To do your part in making for a productive seminar (and to receive full credit for participation), you should: a) **read** each of the week's assigned texts, bring paper or electronic copies to class, and come to class prepared to discuss them; b) by **Sunday evening** before each class, **email me a thoughtful paragraph or two** raising questions, observations, and/or connections that address one or more of the week's readings; c) **attend** each seminar meeting, arriving on time; and d) actively engage in each week's **discussion** as a speaker, listener, and, for one week, as a rapporteur. If for any reason you need to miss a seminar meeting, arrive late, or leave early, please contact me ahead of time.

Readings: Our readings include a selection of recent scholarship and historical sources, amounting to 100-150 pages per week. Since there is no class on Labor Day or Columbus Day, the following classes (Week 2 and Week 6) have longer reading assignments.

Final Project: Research a specific episode of environmental crisis or an attempt to address environmental crisis and write a **paper of 3000 to 6000 words** (not including notes; approximately 12 to 25 double-spaced pages). Drawing on readings and themes from this course, you should analyze your crisis of choice in light of its specific historical contexts and its connections to interpretations of previous or subsequent crises. A **two-page proposal** outlining your topic, research questions, and sources is due on **Nov. 6**. (I will consider well-reasoned proposals for alternative projects. However, all projects must include a substantial written component.) The final paper is due at **5:00pm on Wednesday, December 13**. More details on project and project proposal to come.

Collaboration, academic integrity, and late submissions: You are warmly encouraged to consult with one another and with others outside of class on your selection of final project topics and in the course of your research. The final paper that you submit for evaluation should reflect your own research, thinking, and writing on the topic. Please refer to the [Harvard Guide to Using Sources](#) for University policies on plagiarism. A **half letter grade per day** (A to A-, A- to B+, etc.) will be deducted from assignments submitted after the deadline listed on the syllabus, except with prior consultation and written consent of the instructor. If you have questions about deadlines or collaboration, please let me know!

Required Books:

- Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 2002). (Originally published in 1962.) Available at *The Coop* and online, new and used, for \$10-\$20.
- Jacob Hamblin, *Arming Mother Nature: The Birth of Catastrophic Environmentalism* (New York: Oxford University Press, 2013). Available online for \$5-\$25.

Week 1: Introduction**Wednesday, August 30**

Please note that our first meeting is on Wednesday, August 30, at the usual time and location. There is no reading for our introductory meeting. We will meet for a full two-hour session.

No class (Labor Day)**September 4****Week 2: *Silent Spring*****September 11***Silent Spring*

- Rachel Carson, *Silent Spring* (1962), Chapters 1-3, 8-11, 14, 16-17

Critiques

- "The Desolate Year," *Monsanto Magazine* (October 1962), 4-9
- Thomas Jukes, "DDT, Human Health and the Environment," *Boston College Environmental Affairs Law Review* 1 (1971), 534-564

Consequences

- Frederick Rowe Davis, "Pesticides and Toxicology after the DDT Ban," in *Banned: A History of Pesticides and the Science of Toxicology* (2014), 188-213
- Naomi Oreskes and Eric Conway, "Denial Rides Again," in *Merchants of Doubt* (2010), 216-239

Week 3: Natural disasters**September 18***Wonders*

- Lorraine Daston and Katherine Park, "Horror: Monsters as Prodigies," *Wonders and the Order of Nature* (1998), 177-190
- Conrad Lycosthenes, *Prodigiorum ac ostentorum chronicon [Chronicle of Portents and Prophecies]* (1557), selected woodcuts

Earthquakes

- Conevery Valencius, "Vernacular Science: Knowing Earthquakes in the Early United States," in *The Lost History of the New Madrid Earthquakes* (2013), 175-215
- Fa-Ti Fan, "'Collective Monitoring, Collective Defense': Science, Earthquakes, and Politics in Communist China," *Science in Context* 25 (2012): 127-154
- Mark Twain, "A Page from a Californian Almanac" in *The Celebrated Jumping Frog of Calaveras County and Other Sketches* (1867), 132-134

- Phil O'Keefe, Ken Westgate, and Ben Wisner, "Taking the naturalness out of natural disasters," *Nature* 260 (1976), 566-567

Gaia

- James Lovelock, *Gaia: A New Look at Life on Earth* (1979), 1-43, 100-114
- Philip Ball, "James Lovelock Reflects on Gaia's Legacy," *Nature News* (2014)

Week 4: Chemical spills

September 25

Bhopal

- Will Lepkowski, "Bhopal: Indian City Begins to Heal But Conflicts Remain" *Chemical & Engineering News* 63 (December 2, 1985): 18-32
- "Union of India's Plaint" and selection from "Written Statement of Union Carbide," in Upendra Baxi and Amita Dhanda, ed., *Valiant Victims and Lethal Litigation: The Bhopal Case* (1990), 3-12, 61-63
- Sheila Jasanoff, "Introduction" and Paul Shrivastava, "Societal Contradictions and Industrial Crises," in *Learning From Disaster: Risk Management After Bhopal* (1994), 1-21, 248-267

Making sense of toxic events

- Don DeLillo, "The Airborne Toxic Event," in *White Noise* (1985), 109-163
- Kim Fortun, "From Bhopal to the Informing of Environmentalism," *Osiris* 19 (2004): 283-296

Week 5: Nuclear crises

October 2

Fallout

- John Hersey, "Details are Being Investigated" and "Panic Grass and Feverfew," in "Hiroshima," *The New Yorker* (1946)
- "Pathologic Effects of Atomic Radiation," *Science* 124 (July 13, 1956): 60-63
- United States Congress Joint Committee on Atomic Energy, *The Nature of Radioactive Fallout and its Effects on Man* (1957), iii, 1-2, 523, 537-550

What it means to be nuclear

- Gabrielle Hecht, "An Elemental Force: Uranium Production in Africa, and What It Means to be Nuclear," *Bulletin of the Atomic Scientists* 68 (March 1, 2012): 22-33
- Charles Perrow, *Normal Accidents* (1984), 3-31
- Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (2013) 3-9, 165-177, 297-312

No class (Columbus Day)

October 9

Optional field trip to award-winning redeveloped brownfields site in Kendall Square.

Week 6: Environments at war

October 16

Poison gas and pesticides

- Edmund Russell, *War and Nature* (2001), 1-16

The science of crisis

- Jacob Hamblin, *Arming Mother Nature: The Birth of Catastrophic Environmentalism* (2013)



Amusement park abandoned since the meltdown of the nearby Chernobyl nuclear facility.

Week 7: Extinction and invasion

October 23

Extinction

- Mark V. Barrow, *Nature's Ghosts: Confronting Extinction from the Age of Jefferson to the Age of Ecology* (2009), 46-107
- H.E. Strickland and Melville, *The Dodo and its Kindred* (1848), 3-7
- Sophia Roosth, *Synthetic* (2017), 150-172

Invasion

- Elizabeth Kolbert, "The Big Kill," *The New Yorker* (15 Dec 2014)
- Mark A. Davis, "Don't Judge Species on Their Origins," *Nature* 474 (9 June 2011): 153-154
- H.C. Watson, *Remarks on the Geographical Distribution of British Plants* (1835), 38-42
- H. C. Watson, *Cybele Britannica*, vol. 1 (1847), 62-64

Week 8: Wilderness in crisis and wilderness from crisis**October 30***Humans and wilderness*

- Frederick Jackson Turner, "The Significance of the Frontier in American History" (1894)
- William Cronon, "The Trouble with Wilderness, or Getting Back to the Wrong Nature," in *Uncommon Ground*, ed. William Cronon (1996): 69-90
- Stephen Brain, "The Great Stalin Plan for the Transformation of Nature," *Environmental History* 15 (2010): 670-700
- Bradley Cantrell, Laura J. Martin, and Erle C. Ellis, "Designing Autonomy: Opportunities for a New Wildness in the Anthropocene," *Trends in Ecology & Evolution* (2017): 156-166

Wasteland as wilderness

- Anna Lowenhaupt Tsing, "The Arts of Noticing" and "Resurgence," in *The Mushroom at the End of the World* (2015): 21-24, 104-109
- John Wendle, ["Chernobyl and Other Places Where Animals Thrive Without People."](#) *National Geographic* (9 October 2015)
- John Wendle, ["Animals Rule Chernobyl 30 Years After Nuclear Disaster."](#) *National Geographic* (April 16, 2016)

Week 9: Food and famine**November 6**

***Final Project Proposal due ***

*Schedule Final Project meetings**Famine*

- William C. Jordan, *The Great Famine: Northern Europe in the Early Fourteenth Century* (1996), 7-23
- Thomas Malthus, *An Essay on the Principle of Population*, 4th ed. (1807), 1-29

Food

- Norman Borlaug, "The Green Revolution, Peace, and Humanity" (Nobel Peace Prize Lecture), 1970
- Vandana Shiva, *The Violence of the Green Revolution* (1991), 19-60
- Michael Specter, "Seeds of Doubt," *The New Yorker* (August 18, 2014)
- Sheila Jasanoff, *Designs on Nature: Science and Democracy in Europe and the United States* (2005), 119-145

Week 10: Crisis and justice at home and at work

November 13

Final Project meetings

Cities

- Charles Dickens, *Hard Times* (1854), 32-33
- Gregg Mitman, "Choking Cities," in *Breathing Space: How Allergies Shape Our Lives and Landscapes* (2007): 130-166

Lead

- Gerald Markowitz and David Rosner, *Lead Wars* (2013), 51-65
- Flint Water Advisory Task Force, "Background," in *Final Report* (2016), 15-26
- Nikhil Anand, "The Banality of Infrastructure," *Just Environments* (June 27, 2017)

Perception

- Richard White, "'Are You an Environmentalist or Do You Work for a Living?': Work and Nature," in *Uncommon Ground* (1996), 171-185
- William Ruckelshaus, "Stopping the Pendulum" (1996)
- Michelle Murphy, "Uncertain Exposures and the Privilege of Imperception," *Osiris* 19 (2004): 266-282

Guest Presenter: Elena Sobrino, Red Cross volunteer in Flint and MIT graduate student

Week 11: Climate change and the economics of crisis

November 20

Work on Final Project

Climate modeling

- Paul Edwards, "Simulation Models and Atmospheric Politics," in *A Vast Machine*, 357-396
- Keynyn Brysse et al., "Climate change prediction: Erring on the side of least drama?" *Global Environmental Change* 23 (2013): 327-337

Putting a price on crisis

- "Economics, Ethics and Climate Change" and "Technical annex: ethical frameworks and intertemporal equity," in *Stern Review: The Economics of Climate Change* (2007), 23-52
- William D. Nordhaus, "Critical Assumptions in the Stern Review on Climate Change," *Science* 317 (July 13, 2007): 201-202
- Sixteen Scientists, "No Need to Panic About Global Warming," *The Wall Street Journal* (January 27, 2012)
- William D. Nordhaus, "Why the Global Warming Skeptics are Wrong," *New York Review of Books* (March 22, 2012)
- Michael D. Gordin, "Separating the Pseudo from Science," *The Chronicle of Higher Education* (September 17, 2012)

Week 12: Telling stories about environmental crisis

November 27

Work on Final Project!

- Lawrence Buell, "Toxic Discourse," *Critical Inquiry* 24:3 (1998): 639-665
- Naomi Oreskes and Erik Conway, "The Collapse of Western Civilization: A View from the Future," *Daedalus* 142 (2013): 40-58
- Luntz Research Companies, "The Environment: A Cleaner, Safer, Healthier America," (2002): 131-146
- Rob Nixon, "Slow Violence and Environmental Storytelling," *Nieman Storyboard* (June 13, 2011)
- Octavia Butler, "Brave New Worlds: A Few Rules for Predicting the Future," *Essence* (May 2000): 165-166, 264
- Meir Rinde, "Imagining a Postcarbon Future" *Distillations* (Fall 2016)

Final Project Due Dates

I will be happy to review and comment on:

- *Final Project outlines submitted by 5:00pm on Friday, December 1.*
- *Final Project drafts submitted by 5:00pm on Friday, December 8.*

FINAL PROJECT DUE DATE: 5:00PM ON WEDNESDAY, DECEMBER 13



Bumper sticker protesting restrictions on logging in the US Pacific Northwest.