

## History 165S: Environments in Crisis

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Understandings of human-environment relationships have 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 environmental crises. We will learn to sort out the complex dynamics of nature, knowledge, ethics, and power wrapped up in environmental crises, the scientific and political stakes of past arguments over what is and isn't a crisis, 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.

**Learning Goals:** After taking this course, students will be able to:

- Identify and analyze a range of materials that may comprise historical primary sources, including materials not available digitally;
- Identify and analyze scholarly secondary sources, including materials not available digitally;
- Describe a range of approaches to telling histories and scholarly debates within and among them (historiography);
- Craft a historical research question and identify a historical source base for answering it, such that research question and source base are appropriate to one another and of appropriate scope for a term paper assignment;
- Conduct independent primary source research, including consulting materials not available digitally;
- Assess their own and others' work according to criteria for good historical writing and argumentation: quality of research (selection and interpretation of evidence, attention to context, soundness of argument), engagement with historiography, clarity and structure of argument, originality and significance of argument.

**Grading:** Participation 40%, Short Paper 10%, Proposal 10%, Term paper 40%

**Participation:** To do your part in making for a productive class (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 the evening before the first class of each week, **post a thoughtful paragraph or two** raising questions, observations, and/or connections regarding the week's readings; c) **attend** each class 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 class 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.

**Short Paper:** Write a paper of 3 to 5 double-spaced pages presenting an argument contrasting the perspectives on environmental crisis presented in two of our readings, as it pertains to a historical environmental crisis. You may wish to revise and expand on points you raised in weekly response emails; you are encouraged to use this short paper as an opportunity to explore a possible final project topic.

**Final Project:** Drawing on readings and themes from this course, research a historical environmental crisis and/or interpretations of this crisis and write a paper of 15 to 20 double-spaced pages. We will work together on this research throughout the second half of the course, taking one meeting a week for workshopping our work in progress together. A **two-page proposal** outlining your topic, research questions, and sources is due on **TBD**. (I will consider well-reasoned proposals for alternative projects. However, all projects must include a substantial written component.) The final paper is due on **TBD**. Details to come.

**Collaboration and academic integrity:** You are warmly encouraged to consult with one another, with others outside of class, and with your instructors on your writing for this class. All work you submit for evaluation should reflect your own reading, thinking, and writing about the topic. If you have any questions about appropriate collaboration, ***please ask!*** This course is subject to the [Duke Community Standard](#)—make sure you’re familiar with it.

### Required Books:

- Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 2002). (Originally published in 1962.) Full-text online. *Print copies available 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.*

***NOTE: Readings below are sample readings; syllabus readings will be chosen from among these, amounting to approximately 100-150 pages per week.***

### Week 1: Introduction

*Should we be freaking out?*

- David Wallace-Wells, “The Uninhabitable Earth,” *New York* (2017)
- Michael E. Mann, comments on “The Uninhabitable Earth” (2017)
- Robinson Meyer, “Are We as Doomed as that *New York Magazine* Article Says?” *The Atlantic* (2017)
- Naomi Oreskes and Erik Conway, *The Collapse of Western Civilization* (2014)

### Week 2: *Silent Spring* (Primary sources)

*Intro meetings*

*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*

- Naomi Oreskes and Erik Conway, "Denial Rides Again," in *Merchants of Doubt* (2010), 216-239
- Clapperton Mavhunga, "The Coming of the Organochlorine Pesticide" and "DDT, Pollution, and Gomara: A Muted Debate" in *The Mobile Workshop*, 211-222, 267-288.

## **Week 3: Natural disasters (Secondary sources)**

### *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

### *Hurricanes*

- Stuart B. Schwartz, *Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina* (2014), Chapter 2 and Chapter 8.
- Juliette Landphair, "'The Forgotten People of New Orleans': Community, Vulnerability, and the Lower Ninth Ward," *The Journal of American History* 94 (2007): 837-845.
- 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 (Historical arguments)**

### *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 Complaint" 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 (Work-in-progress workshop)**

*\*\*Short Paper due at end of week\*\**

#### *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

### **Week 6: Archive visit and/or field trip**

*We will visit Rubenstein library during the first class of this week. During the second class of this week, students may choose to return to Rubenstein library or (potentially) take a trip to one or more field sites (e.g. redeveloped brownfields, waste transfer station, recycling plant, Duke farm, and/or urban garden).*

### **Week 7: Environments at war (Research questions and source bases)**

#### *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 8: Telling stories about environmental crisis (Project proposal presentations)**

*\*\*\*Final Project Proposal due at end of week\*\*\**

- Lawrence Buell, "Toxic Discourse," *Critical Inquiry* 24:3 (1998): 639-665
- 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
- Joseph Masco, "The Crisis in Crisis," *Current Anthropology* 58:S15 (2016): S65-76.

## **Week 9: Extinction and invasion (Annotated bibliographies 1)**

### *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
- Banu Subramaniam, *Ghost Stories for Darwin* (2014), 95-156.

## **Week 10: Wilderness in crisis, wilderness from crisis (Annotated bibliographies 2)**

### *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 11: Food and famine (Argument-building drafts 1)**

### *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*, 4<sup>th</sup> 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 12: Crisis and justice at home and at work (Argument-building drafts 2)***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
- Naomi Klein, *The Shock Doctrine* (2007), excerpt from introduction.

*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

**Week 13: Climate change & the economics of crisis (Intro & historiography drafts 1)***Final Project meetings**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 14: Wrap-up (Intro & historiography drafts 2)**

*I will be happy to review and comment on:*

- Final Project outlines submitted by [ten days before due date].
- Final Project drafts submitted by [five days before due date].

**FINAL PROJECT DUE DATE: TBD**



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