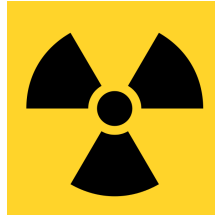


Radioactive Culture (seminar)
Instructor: Dr. Melinda Baldwin
Thursdays, 12-2 p.m.



Would you go into a building that had this symbol on the door? Do your parents tell you stories about nuclear bomb drills in their elementary schools? Would you want to live in the same neighborhood as a nuclear power plant? Why did Stan Lee choose a radioactive spider to turn Peter Parker into Spider-Man? Our culture has strong ideas about radioactivity. How have those ideas changed over time? And how do they relate to the science of radioactivity? This seminar will explore the cultural history of radioactivity. Sample topics include newspaper coverage of nuclear science, ways people have prepared for possible nuclear catastrophes, and literature and films with nuclear themes.

Required Books

- Spencer Weart, *The Rise of Nuclear Fear* (Cambridge: Harvard University Press, 2012).
- Susan Quinn, *Marie Curie: A Life* (New York: Perseus Books, 1995).
- Kenneth Rose, *One Nation Underground: The Fallout Shelter in American Culture* (New York: NYU Press, 2001).
- Lauren Redniss, *Radioactive: Marie & Pierre Curie: A Tale of Love and Fallout* (New York: It Books, 2010).

All other reading will be available through Harvard's library resources (I will provide links on the course iSite) or as PDF downloads on the course iSite (available through my.harvard.edu).

Films will be on course reserve in Lamont Library. I also plan to screen films in the Science Center, room scheduling permitting. If you cannot attend a screening you are responsible for making your own arrangements to view the film.

Schedule of readings

January 30: Professor Röntgen's marvelous rays

- W. C. Röntgen, "On a New Kind of Rays," trans. Arthur Stanton, *Nature* 53 (23 January 1896): 274-276.
- A.A.C. Swinton, "Professor Röntgen's Discovery," *Nature* 53 (23 January 1896): 276-277.

February 6: Becquerel rays and “radioactivity”

- Quinn, *Marie Curie: A Life* (1996), Chapters 7-8
- Matthew Lavine, “The Early Clinical X-Ray in the United States: Patient Experiences and Public Perceptions,” *Journal of the History of Medicine and Allied Sciences* 67 (2012): 587-625.
- Lawrence Badash, “Radium, Radioactivity, and the Popularity of Scientific Discovery,” *Proceedings of the American Philosophical Society* 122 (1978): 145-154.
- Henri Becquerel, “On the Invisible Radiations Emitted by the Salts of Uranium,” *Chemical News* 73 (10 April 1896): 167-168.
- P. Curie and Mdme. P. Curie, “Radio-Activity due to Becquerel Rays,” *Chemical News* 80 (8 December 1899): 269.

February 13: Radioactive celebrity and the healthful properties of radium

- Quinn, *Marie Curie: A Life*, Chapters 9-12, 17.
- Weart, *The Rise of Nuclear Fear*, Chapter 3, “Radium: Elixer or Poison?” and Chapter 4, “The Secret, the Master and the Monster”
- “Mme. Curie is Dead; Martyr to Science,” *New York Times* (5 July 1934). Available at <http://www.nytimes.com/learning/general/onthisday/bday/1107.html>.

February 20: The atom splits; the bomb is built

- Weart, *Nuclear Fear*, Chapter 5: “The Destroyer of Worlds”
 - Ruth Lewin Syme, *Lise Meitner: A Life in Physics*, Chapter 10: “The Discovery of Nuclear Fission”, pp. 231-259
 - Nkechi Agwu and Asamoah Nkwanta, “Dr. J. Ernest Wilkins, Jr.: The Man and His Works: Mathematician, Physicist and Engineer,” in Nathaniel Dean, ed., *African Americans in Mathematics* (Providence, RI: American Mathematical Society, 1997), pp. 195–205
 - Alex Wellerstein, “The Faces of Project Y,” *Restricted Data: The Nuclear Secrecy Blog*, online at <http://blog.nuclearsecrecy.com/2012/08/31/the-faces-of-project-y/>.
 - Leon Gortler and Stephen J. Weininger, “Chemical Relations: William and Lawrence Knox, African American Chemists,” *Chemical Heritage Magazine*. Online at <http://www.chemheritage.org/discover/media/magazine/articles/28-2-chemical-relations.aspx?page=1>
 - Henry DeWolf Smyth, *Atomic Energy for Military Purposes* (Palo Alto: Stanford University Press, 1989 [1945]), Chapter 13, “General Summary.” Available online at http://www.atomicarchive.com/Docs/SmythReport/smyth_xiii.shtml
 - Michael Gordin, *Five Days in August: How World War II Became a Nuclear War* (Princeton: Princeton University Press, 2007), Chapter 1, “Endings”
- Don't forget: Your blog entry topic choice is due by Sunday, Feb. 23!*

February 27: Life in the post-atomic age

Your blog entry is due today!

- Weart, *The Rise of Nuclear Fear*, Chapter 6, “The News from Hiroshima,” and Chapter 11, “Death Dust”

- John Hersey, *Hiroshima* (New York: Vintage Books, 1989 [1945]), Chapter 1 and Chapter 4
- Selections from Keiji Nakazawa, *Barefoot Gen*
- Dmitris Bourantonis, “The Negotiation of the Non-Proliferation Treaty, 1965-1968: A Note,” *The International History Review*, Vol. 19, No. 2 (May, 1997), pp. 347-357.
- “First Atomic Bomb is Dropped on Japan,” *New York Times* (6 August 1945), online at <http://www.nytimes.com/learning/general/onthisday/big/0806.html>
- “Test Ban Treaty Signed in Moscow,” *New York Times* (5 August 1963), online at <http://www.nytimes.com/learning/general/onthisday/big/0805.html>
- “Test-Ban Aftermath,” *Wall Street Journal* (25 September 1963): 1.

March 6: Does nuclear war mean nuclear apocalypse?

- Kenneth Rose, *One Nation Underground: The Fallout Shelter in American Culture*, Chapter 2, “The Nuclear Apocalyptic,” pp. 38-77
- Jacques Derrida, “No Apocalypse, Not Now,” *Diacritics* 14 no. 2 (Summer, 1984): 20-31
- Selections from Herman Kahn, *On Thermonuclear War*
- Watch “Fail-Safe” (1964)

March 13: What would survival look like?

- Kenneth Rose, *One Nation Underground: The Fallout Shelter in American Culture*, Chapter 5: “The Theory and Practice of Armageddon”, pp. 150-186
- Spencer Weart, *The Rise of Nuclear Fear*, Chapter 12, “The Imagination of Survival”
- Selections from Herman Kahn, *On Thermonuclear War*
- Ray Bradbury, “There Will Come Soft Rains”
- Uzbekfilms, “There Will Come Soft Rains (adaptation)”: http://www.youtube.com/watch?v=WfI69DC_jaw
- Octavia Butler, “Speech Sounds”
- Watch “Dr. Strangelove” (1964)

March 20: No class – Spring Break

March 27: How to protect your family from nuclear annihilation

- Rose, *One Nation Underground*, Chapter 3, “Morality and National Identity at the Shelter Door,” Chapter 4, “Taking Government, Business, and Schools Underground,” and Chapter 6, “The Shelters that Were Not Built, the Nuclear War That Did Not Start”
- Watch “Duck and Cover” at <https://archive.org/details/DuckandC1951>
- “Fallout Shelters,” *LIFE* (15 September 1961): 95-108. Available on Google Books: <http://bit.ly/1eGZJd5>

April 3: Nuclear power, nuclear disaster?

Your research paper topic proposal is due today!

- Weart, *The Rise of Nuclear Fear*, Chapter 16, “Reactor Promises and Poisons”, Chapter 20, “Watersheds,” and Chapter 21, “The Second Nuclear Age”
- “Radiation Is Released in Accident at Nuclear Plant in Pennsylvania,” *New York Times*, 29 March 1979. Available online at <http://www.nytimes.com/learning/general/onthisday/big/0328.html#article>
- “Soviet Announces Nuclear Accident at Electric Plant,” *New York Times*, 28 April 1986. Available online at <http://www.nytimes.com/learning/general/onthisday/big/0426.html>
- “Nuclear Disaster: How Could it Happen? Soviet Keeps Lid on News Coverage,” <http://www.nytimes.com/1986/04/30/world/nuclear-disaster-how-could-it-happen-soviet-keeps-lid-on-news-coverage.html?ref=chernobylnuclearaccident1986>
- “Soviets Report Nuclear Accident; Initial Data Show Serious Damage,” *Wall Street Journal* (29 April 1986): 3.
- “Nuclear Power: The Dream That Failed,” *The Economist*, available online at <http://www.economist.com/node/21549936>
- “Nuclearphobia,” *The Economist*, available online at <http://www.economist.com/blogs/banyan/2012/08/japan-and-atom>
- “Fear vs. Radiation: The Mismatch,” http://www.nytimes.com/2013/10/22/opinion/fear-vs-radiation-the-mismatch.html?_r=0
- Watch “The China Syndrome” (1979)
- Watch “Homer Defined” (*The Simpsons*, Season 3, Episode 5 – 1991)

April 10: Anti-Nuclear Movements

- Weart, *The Rise of Nuclear Fear*, Chapter 13, “The Politics of Survival,” and Chapter 19, “Civilization or Liberation?”
- Wolfgang Rudig, *Anti-nuclear Movements: A World Survey of Opposition to Nuclear Energy* (New York: Longman, 1990), Preface and Introduction
- Jim Falk, *Global Fission: The Battle Over Nuclear Power* (Oxford: Oxford University Press, 1982), Chapter 5, “Origins of the Opposition”
- Angela Creager, *Life Atomic: A History of Radioisotopes in Science and Medicine* (Chicago: University of Chicago Press, 2013), Chapter 5, “Dividends”
- “Nuclear Power, Nuclear Weapons: The Deadly Connection” (1985), available at <http://digitalarchive.wilsoncenter.org/document/110909>
- Watch “Silkwood” (1982)

April 17: Radioactive monsters and heroes

- Watch “THEM!” (1954)
- *Amazing Spider-Man #1* (1963)
- *Radioactive: Marie & Pierre Curie: A Tale of Love and Fallout* (New York: It Books, 2010).
- **NEW!** Hillary Chute and Marianne DeKoven, “Comic Books and Graphic Novels,” *The Cambridge Companion to Popular Fiction*, eds. David Glover and Scott McCracken (2012).

April 24: Preparing for the end

- Alex Wellerstein, “Mortuary Services in Civil Defense,” “The Bureaucracy Will Survive the Apocalypse,” and “Beer and the Apocalypse,” *Restricted Data: The Nuclear Secrecy Blog*.
- Jules Feiffer, “Crawling Arnold” (play, 1963)
- *On the Beach* (film, 1959)
- Selections from Nevil Shute, *On the Beach*, Chapter 9 (book, 1957)

May 1: Student research presentations

No class May 8 (Reading Period)
Your research paper is due by 11:59pm on Thursday, May 8.
Enjoy the summer!