

HS-339: Technology and Its Critics in the Modern Age

Instructor: Toshihiro Higuchi

3 credits; Z (Humanities or Social Science), A (Advanced)
T 2:30 to 3:45 pm (lecture); R 2:30 to 3:45 (discussion); 2120 Chamberlin
Office hours: M: 1:30 to 2:30; W: 1:30 to 2:30 @ Bradley Memorial, #214
Prerequisites: Junior standing or consent of instructor

Course Description

This course examines the ideas and actions of people who questioned technology and its consequences as the world entered the industrial-machine age by the nineteenth century. Technology as a modern project not only invented artifacts but remolded time, space, human bodies, and natural landscape. This pervasive and diffusing technological force, however, simultaneously created a new historical agent of technological critics. Instead of treating them as the anachronistic or irrational "luddites," we will seek to understand them in the rich historical contexts of their time. Section 1 overviews and contrasts the different encounters of Europe, America, and Asia to the machine age out of which some of the earliest critics emerged. Following Section 1, a main focus will be on the United States. Section 2 discusses the critics of mass production, mass consumption, and mass destruction, all constituting the technological frontier that shaped America's Golden Age from the 1920s to the 1950s. Section 3 takes a close look at four key American critics who led the subsequent rise of consumer and environmental movements: Lewis Mumford, Ralph Nader, Rachel Carson, and Barry Commoners. Section 4 concludes the course by discussing the post-1970 era when critics sought alternative approaches to energy, food, medicine and more.

Required Readings

Each week, we will read approximately 50 to 75 pages of historical documents, journal articles, and book chapters, all uploaded to Learn@UW. No book is required for purchase.

Course Requirements

- Attendance (Mandatory – see Attendance Policy for detail)
- Blog postings (2 point x 12 weeks = 24 points)
- Blog comments (1 point x 12 weeks = 12 points)
- Mid-term Review (24 point)
- Final paper (40 point)

The numerical equivalents of final grades (letter) are as follows: A=>93; AB=92-88; B=87-83; BC=83-79; C=78-74; CD=73-69; D< 68

Attendance Policy

Attendance is mandatory for all students. Any scheduled absence during the semester due to, for example, religious holidays, extra-curriculum activities, GRE/GMAT/LSAT exams, job interviews or familial affairs, must be reported to your instructor by February 5 by email. Additional information regarding your requested leave may be asked for. Please note that this course is intended to be a discussion class for a small number of students. As such, no class can succeed without your active participation. For this reason, please refrain from taking the pre-Thanksgiving leave.

After February 5, no unreported absence is acceptable, except for the allowance of one (1) unscheduled absence. Every absence in addition to the one (1) allowable unscheduled absence will result in a 5-point penalty against the total score. This penalty can be avoided if such absences accompany the prompt submission of the Dean's letters or doctor's notes.

Blog postings

By 1 pm on the day of class every Thursday, except for the first and last classes and one week of your choice, you are asked to post your comment on the course materials of the week at Learn@UW (<https://learnuw.wisc.edu/>). The blog should relate to, but not be limited to, a set of questions that

your instructor provides regarding the materials. Each entry, which should contain at least 250 words, will count as 2 point toward the final grade (2 points x 12 out of 15 weeks = 24 points).

Blog comments

The blog is an interactive media, so please make sure to post at least one comment on any blog entry of your colleagues/instructor each week, except for the first and last classes and one week of your choice. There is no minimum word length for your comment, but it should fully engage in the substance of the blog concerned (as opposed to simply expressing your feeling). Comments each week counts as 1 point (1 point x 12 weeks = 12 points).

Writing Assignments

You are required to write 1) a mid-term review (up to 1,500 words) of the course materials of any week through WEEK 6 (24 points), and 2) a term paper on the topic of your choice in consultation with the instructor (3,000 words) (40 points). Please note that the word limit excludes footnotes and bibliography.

The instructor will try to confirm your mastery of course readings and class discussion. Therefore, please use many class readings as your sources, an effective way to show your familiarity with the assignments. The lack or shortage of engagement with course readings and class discussion will lead to the reduction of points by up to 50%. It is encouraged, but not required, to consult primary sources concerning your paper topic, e.g., government documents, personal papers, newspapers and magazines, oral histories, interviews, audio-visual materials, architectures and monuments. Please feel free to contact your instructor for additional recommended readings or primary sources on your paper topic.

It is strongly encouraged to consult with your instructor during office hours, before and after class. The students are also advised to visit the writing resources center in order to develop an idea for the paper, polish writing skills, and ensure proper grammar and syntax. Please feel free to forward your draft, even in a rough form, to the instructor prior to submission for comments and suggestions. For a history paper, the indication of sources is essential. You must follow Chicago Manual of Style for your writing assignments. Visit <http://www.libs.uga.edu/ref/chicago.html#docnote> and check "Documentary-Note Style." DO NOT use an in-text reference system. An incorrect format will result in a deduction of 3 out of the total 24 points for the mid-term essay, or 4 out of 40 for the term paper.

The mid-term review essay should be submitted at the beginning of class on Tuesday, March 5. It must be submitted in hard copy. No electronic copy will be accepted. The final paper should be submitted electronically by 3:30 pm, May 14.

Late Papers Policy

You are given two grace days. You may use them whenever necessary. You can turn in two assignments one day late or one assignment two days late without penalty. In case of the mid-term paper, you are asked to bring the paper during my Wednesday office hours, put it in my mailbox at Bradley Memorial, or simply bring it to Thursday class. For the term paper, late submission means either May 15 or 16 (by 3:00 pm). After the use of the grace days, 4 points will be deducted from the total 12 points for each review essay, or 8 out of 40 for the final paper. If the paper is submitted later than a week from the due date (regardless of grace days), the points will be reduced by 50 percent unless there is a note from the Dean explaining the reasons you could not complete the work.

Academic Honesty and Plagiarism

It is your responsibility to review the Honor Code, to know the definition of plagiarism, and to know how to use proper attribution (including citations for internet sites, should you use them) in your written assignments. If you are uncertain about the limits of collaboration on assignments, please contact me at any time.

Academic honesty is not only a standard to which all of you have pledged yourselves, but is also the foundation of any intellectual exchange, and thus of any intellectual community such as a University.

Academic honesty does not consist simply in the avoidance of outright cheating on exams, but more generally represents a set of standards all of us must follow in our academic work in order to protect the integrity and effectiveness of that work, and to preserve the ideals and essence of teaching, learning, and research. This implies, for instance, never submitting as our own scholarly work which we have not personally produced in its entirety, not collaborating with others on assignments and projects that are not specifically designed as collaborative efforts, and learning how to acknowledge properly all sources we may use in our written work. The latter includes not only proper documentation style for direct citations, but also references when we paraphrase sources and acknowledgements when we employ or develop ideas we have found in the work of others. These practices apply to sources of any type, from books to newspapers, from lectures to materials available on the Internet, and so on.

Learn@UW

All students in the class are automatically registered for this course on Learn@UW. When you log on to Learn@UW and access the site for this course, you will find all course documents (including this syllabus and the course assignments). Please familiarize yourselves with the course site, and let me know if you encounter any problems accessing it or the materials.

Weekly Schedule

Week 1 (1/22; 1/24): What Is Technology? A Critical Look

Roe Smith and Clancy eds., *Major Problems in the History of American Technology*:

Leo Marx, "The Invention of 'Technology'," 2-7

Langdon Winner, "Do Artifacts Have Politics?" 7-13

Donald MacKenzie, "The Social Shaping of Technology," 13-15.

Section 1: The World Meets Machine (1800-1920s)

Week 2 (1/29; 1/31): Europe and "Machine Breakers"

Brian Bailey, *The Luddite Rebellion* (1998), 1-32.

Kevin Binfield ed., *Writings of the Luddites* (2004):

"An Address from the Framework-Knitters," 77-78.

Song, "General Ludd's Triumph," 95-100.

Letter from a "poor woman" at "Lester," 139-141.

Week 3 (2/5; 2/7 CANCELLED): America and "Machine in the Garden"

Leo Marx, *Machine in the Garden* (1964; 2000), 227-265.

Roe Smith and Clancy eds., *Major Problems in the History of American Technology*:

Thomas Jefferson, "Notes on Virginia," 105-106.

_____. "Manufacturer, 1795-1816," 114-119.

"Thomas Cooper against Factories," 1823, 119.

Week 4 (2/12; 2/14): Asia and "Black Ship" from the West

Roe Smith and Clancy eds., *Major Problems in the History of American Technology*:

Michael Adas, "Machines as the Measure of Men," 221-232.

Rebecca Brown, *Gandhi's Spinning Wheel and the Making of India* (2010), 66-85.

Mahatma Gandhi, *The Essential Writings* (2008):

"Eradicating machinery," 83-85.

"A humanitarian industrial policy—hand-spinning," 87-88.

"Appropriate mass production," 88.

Section 2: Mass Production, Mass Consumption, and Mass Destruction (1920s-1950s)

Week 5 (2/19; 2/21): Mass Production

Roe Smith and Clancy eds., *Major Problems in the History of American Technology*:

Frederick Taylor, "The Principles of Scientific Management," 269-275.

"A Trade Unionist Attacks Taylorism," 280-281.

Frank Carlton, "A Political Scientist on Scientific Management," 287-289.

Charles Sorensen, "Inventing the Assembly Line," 320-322.
Charles Madison, "My Seven Years of Automotive Servitude," 325-328.
Antonio Gramsci, "Americanism and Fordism," in *Prison Notebooks*, 215-220.
Watch part of Charlie Chaplin, *Modern Times* (1936)

Week 6 (2/26; 2/28): Mass Consumption and Mass Communication
Vance Packard, *The Waste Makers* (1958), 10-19, 53-67, 314-327.
_____, *The Hidden Persuaders* (1957), 3-37, 46-56, 72-83.

Week 7 (3/5; 3/7): Against Nuclear Weapons (**Midterm review paper due on 3/5**)
Edward Teller, *Better a Shield Than a Sword*, 3-11
Ralph Lapp, *Arms Beyond Doubt*, 173-193.
Watch portion of Sidney Lumet's *Fail-Safe* (1964; 2000):
7:00-10:25; 14:00-39:40; 48:20-49:20; 57:20-1:00:30; 1:13:30-1:14:40; 1:16:00 to
the end
Watch portion of Stanley Kubrick's *Dr. Strangelove* (1964):
24:15 to 54:00; 1:13:20 to the end

Week 8 (3/12; 3/14): Against Nuclear Reactors
Thomas R. Wellock, "Stick It in LA! Community Control and Nuclear Power in California's
Central Valley," *The Journal of American History* 84, no. 3 (1997): 942-978.
Gary L. Downey, "Reproducing Cultural Identity in Negotiating Nuclear Power: The Union of
Concerned Scientists and Emergency Core Cooling," *Social Studies of Science* 18, no. 2
(1988): 231-264.

Section 3: Critics (1960s-1970s)

Week 9 (3/19; 3/21): Lewis Mumford and the Radical Critique of Technology
Mumford, *Technics and Civilization* (1934; 1963), 3-7, 364-435.

Week 10 (4/2; 4/4): Ralph Nader and Consumer Awareness
Marti Mueller, "Nader: From Auto Safety to Permanent Crusade," *Science* n.s. 166 (21 Nov.
1969): 979-983.
Ralph Nader, *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile*
(1965), vii-x, 170-209.
_____, "Keynote Address Presented to the Consumer Assembly," in *The Ralph Nader Reader*,
251-260

Week 11 (4/9; 4/11): Rachel Carson, Barry Commoner, and Environmental Awareness
Linda Lear, "Introduction," in Rachel Carson, *Silent Spring*, 40th anniversary edition (1962;
2002): x-xix.
Rachel Carson, *Silent Spring*, 1-13, 277-297.
Michael Egan, "Why Barry Commoner Matters," *Organization and Environment* 22, no. 1
(2009): 6-18.
Barry Commoner, *Science and Survival* (1967), 9-29, 121-132.

Section 4: Beyond Critique (1970s-Present)

Week 12 (4/16; 4/18): Appropriate and Alternative Technology
E.F. Schumacher, *This I Believe and Other Essays* (1997), 35-43, 130-142, 97-116.
Andrew Kirk, "Machines of Loving Grace: Alternative Technology, Environment and the
Counterculture," in *Imagine Nation*, 353-379.
Whole Earth Catalog (1969).

Week 13 (4/23; 4/25): Alternative Food
Matthew Reed, *Rebels for the Soil* (2010), 71-110 (Available as E-book through the Memorial
Library).

Week 14 (4/30; 5/2): Alternative Medicine

James Whorton, *Nature Cures: The History of Alternative Medicine in America* (2002), 221-243, 245-270.

Week 15 (5/7; 5/9): Conclusion

Term paper due on May 14

