

The Politics of Technology

History 615, section 6. George Mason University. Fall 2007

Wednesdays, 7:20 – 10 pm. Innovation Hall 328

Course website: <http://politicsoftechnology.pbwiki.com>

Course discussion board: <http://schrag.freeforums.org>

General advice: <http://www.schrag.info/teaching>

Professor Zachary M. Schrag

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Office Hours: Wednesdays, 10am - noon, and by appointment.

While I greatly enjoy meeting students individually, department meeting and other commitments force me to cancel scheduled office hours several times each term, so individual appointments generally work better. If you would like to meet with me, please send me an e-mail with two or three proposed times. Monday and Wednesday mornings will generally be best, but other weekdays are possible as well.

Course Description

This graduate reading seminar will explore the role of technology in the major political movements of twentieth-century America: Progressivism, the New Deal, Cold War liberalism, and backlash conservatism. While these movements involved broad questions of racial, social, and economic justice, they also included ideas about the role of government in managing transportation, power generation and distribution, weapons development, manufacturing, and other forms of technology. We will therefore consider ways in which political actors--voters, activists, and government officials--made choices about technology and how those choices shaped other political questions. We will ask whether political labels, such as liberal and conservative, can be applied to approaches to technology. The course will focus on the United States in the twentieth-century and is intended to serve, in part, as an examination of the politics of that era. However, we will draw some comparisons from other periods and nations.

Throughout the course, I hope to explore three rival interpretations of these issues:

1. The history of American technology closely tracks the history of American political movements. Progressives behaved like Progressives, New Dealers like New Dealers, Cold Warriors like Cold Warriors.
2. Whatever their particular politics, American political leaders have sought to use technology to serve the needs not of the people, but of the state.
3. Artifacts have their own politics. The politics of technology are dictated less by the wishes of political leaders than by specific technical features inherent in the artifacts.

Administrative information

All assignments are governed by the George Mason University **honor code**, online at <http://www.gmu.edu/departments/unilife/honorcode.html>. You are expected to work independently and to acknowledge all sources, including assigned texts and materials found online. Gordon Harvey's *Writing with Sources* should answer most questions about **citation**, but ask me if you need clarification. In general, any sentence in your work that can be traced to a single sentence in someone else's work should bear a footnote. Any collaboration, such as consultation with the Writing Center, should also be acknowledged. Violations of academic integrity will be reported to the administration and may result in grade penalties, including failure of the course. I reserve the right to submit your drafts and papers to the **turnitin.com** database.

All work for this course must be original. You may not submit work based whole or in part on work you have done for credit in **other courses** without written permission of the instructor.

In case of **inclement weather**, please call the main switchboard at 703-993-1000 or consult the main web page at <http://www.gmu.edu/> to see if classes are cancelled. I expect to cancel class only when the university cancels all classes.

If you are a **student with a disability** and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 703-993-2474. All academic accommodations must be arranged through the DRC.

All students are expected to check their **gmu.edu** e-mail regularly and are responsible for information sent to their GMU addresses.

Please do not send **Microsoft Works** (.wps) attachments; I cannot open them. If you need to send me word-processing documents, save your files as .doc, .rtf, or .pdf formats.

Readings

Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press, 1999

Stradling, David. *Smokestacks and Progressives: Environmentalists, Engineers, and Air Quality in America, 1881—1951*. The Johns Hopkins University Press, 2002.

Worster, Donald. *Rivers of Empire: Water, Aridity, and the Growth of the American West*. Oxford University Press, 1992.

Mulholland, Catherine. *William Mulholland and the Rise of Los Angeles*. University of California Press, 2002.

Craig, Douglas B. *Fireside Politics: Radio and Political Culture in the United States, 1920-1940*. The Johns Hopkins University Press, 2005.

Van Der Linden, F. Robert. *Airlines and Air Mail: The Post Office and the Birth of Commercial Aviation Industry*. University Press of Kentucky, 2002.

McBride, David. *Missions for Science: U.S. Technology and Medicine in America's African World*. Rutgers University Press, 2002.

Russell, Edmund. *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring*. Cambridge University Press, 2001.

Wang, J. *American Science in an Age of Anxiety*. University of N. Carolina Press, 1999.

Edwards, Paul N. *The Closed World: Computers and the Politics of Discourse in Cold War America*. The MIT Press, 1997.

Kay, W. D. *Defining NASA: The Historical Debate Over The Agency's Mission*. State University of New York Press, 2005.

Pool, Robert. *Beyond Engineering*. Oxford University Press, 1999.

Online Components

This course will require you to use two online components: a discussion board and a wiki.

Discussion Board: <http://schrag.freeforums.org>

You will use this site to post responses to readings and lectures. You will need to register to use the board:

- a. On the first page of the board, click "Register." For your user name, please type your full name, e.g., "Zachary Schrag," not "Zach," "zschrage," or "RetroGirl92." Please use your gm.u.edu address to register. I will need to approve your registration.
- b. Once you have received the registration confirmation, please login and test the system. Go to the home page, then click "Practice Forum" You will see one topic: restaurants. Hit "Post Reply" to answer the question.

You are encouraged but not required to add a photograph of yourself to your profile. Image files may be no larger than 100 x 100 pixels and 6KB.

Wiki: <http://politicsoftechnology.pbwiki.com>

A wiki is a collaborative website. We will use ours to post the research responses, since the discussion-board software does not handle images well.

To use the wiki, you really only need two basic skills: creating a new page, and uploading pictures and files. Links to instructions for doing this are posted on the opening page of the wiki.

Assignments

Review papers (10 percent each, 50 percent total)

The main requirement of this course is a series of five review papers, each of which will compare and contrast two books. Six papers are assigned, but only five are required, to allow for illness, family emergencies, and other problems. If you submit all six, your top five grades will count.

Each paper should run roughly 1000-1500 words (4-6 pages). It should present a thesis that explains what we learn from reading both books in combination.

For general instructions on writing a reading response, please see “How to Read a History Book,” “How to Write a Review,” and “How to Write a Reading Response,” all available at <http://www.schrag.info/teaching/index.html>

Good models for the paper can be found in multi-book reviews published in *Technology and Culture* (available at <http://mutex.gmu.edu:2048/login?URL=http://muse.jhu.edu/>) or other scholarly journals. For examples, see:

Kelman, Ari. “Nature Bats Last: Some Recent Works on Technology and Urban Disaster.” *Technology and Culture* 47 (April 2006): 391-402.

Oslund, Karen. “Beyond Men and Machines: New Contributions to the History of Polar Exploration.” *Technology and Culture* 48 (July 2007): 594-597.

Roland, Alex. “Containers and Causality.” *Technology and Culture* 48 (April 2007): 386-392.

The Kelman and Roland essays are considerably longer than what is asked of you, but keep in mind that you need not summarize the books in your essay, since your reader has already read them. Instead, focus on your own argument.

Primary source responses (5 percent each, 15 percent total)

At the start of the course, each student will choose three weeks for which she will be responsible for primary-source responses.

For each of those weeks, the student should find a primary source not presented in that week’s reading that the student feels supports or contradicts the thesis of the book. For example, for a discussion of Gijs Mom’s *Electric Vehicle: Technology and Expectations in the Automobile Age*, an advertisement, magazine article, or song lyrics from the early twentieth century, showing what motorists expected from their vehicles, would be helpful. It is fine to use a source cited or quoted only briefly in the assigned reading, but do not choose a text that is quoted at length or an illustration that is reproduced in the book.

I expect that in most cases you will find your sources online, either on the open Web or in one of the proprietary databases to which the university subscribes. However, you are free to scan or photograph a source that has not been digitized.

Please post your source to the class wiki, <http://politicsoftechology.pbwiki.com>, along with a brief analysis or two or three discussion questions. For instructions on writing an analysis, see “How to Read a Primary Source,” “Document Analysis,” and “Image Analysis,” all at <http://www.schrag.info/teaching/index.html>. For a sample assignment, see <http://politicsoftechology.pbwiki.com/The+Electric+Vehicle>

Mini-responses (2 percent each; 16 percent total)

For each week that reading is due, each student not presenting a primary source will write a three-sentence response. I will also drop the lowest grade, so only the top eight responses will count. Please post your response on the course discussion board by **10am** each Wednesday.

Each response should consist of the following elements:

1. One sentence explaining the thesis of one chapter of the book or the book overall.
2. One sentence noting a fact, quotation, or illustration (with a page reference) from the book and explaining how that fact, quotation, or illustration supports the thesis stated in the first sentence.
3. One sentence noting a fact, quotation, or illustration (with a page reference) from the book and explaining how that fact, quotation, or illustration contradicts or complicates the thesis stated in the first sentence.

Example:

Gijs Mom argues that for a wide variety of uses, electric vehicles were superior to their gasoline counterparts, which Mom finds “noisy, unhygienic, and unreliable.” (13) Berlin’s 1906 ordinance (150) supports the argument about noise. But his repeated references (102, 123, 170) to the short life span and fragility of batteries suggest that electric cars were even less reliable than gasoline cars, contradicting the thesis.

Discussion participation (15 percent)

Students are expected to be in their seats and ready to take notes at the start of class, and to participate actively in class discussions.

Basic classroom rules

- Bring the books we are discussing to class each week.
- Do not eat in the classroom, before or during class.
- Turn off all cell phones, pagers, and other noisemakers.

Conference report (4 percent)

All students are expected to attend at least one day of the annual meeting of the Society for the History of Technology (SHOT), to be held in Washington from October 18 to October 21. Registration details at <http://www.historyoftechnology.org/annualmtg.html>

Following the conference, please write a five paragraph essay describing the most exciting paper, panel, or other event you witnessed. (Tours or paper by your instructor do not count.) Be prepared to share this the class on October 31.

If you absolutely cannot attend the SHOT conference, an alternative is the History of Science Society meeting, to be held in Washington November 1-4. http://www.hssonline.org/07_VA_meeting_info/VA_meeting.htm

Schedule

Date	Topic	Reading	Paper Due
August 29	Introduction		
September 5	Regulation	<i>Seeing Like a State</i>	
September 10	Early registration deadline for SHOT		
September 11	Last day to add classes		
September 12	Regulation	<i>Smokestacks and Progressives</i>	
September 19	Public Works	<i>Mulholland</i>	Regulation
September 26	Public Works	<i>Rivers of Empire</i>	
September 28	Last day to drop		
October 3	Networks	<i>Fireside Politics</i>	Public Works
October 10	Networks	<i>Airlines and Air Mail</i>	
October 17	NO CLASS (SHOT)		Networks (by e-mail)
October 24	NO CLASS (Prof in California)		
October 31	Public Health	<i>Missions for Science; War and Nature</i>	conference paper
November 7	Cold War	<i>American Science in an Age of Anxiety</i>	Public Health
November 14	Cold War	<i>Closed World</i>	
November 21	NO CLASS (Thanksgiving)		
November 28	Reconsideration	<i>Defining NASA</i>	Cold War
December 5	Reconsideration	<i>Beyond Engineering</i>	

Final paper (Reconsideration) due by e-mail, December 12, 7:30 pm.