

Main Themes in the History of Technology

STS 5206 (CRN 95336), HIST 5206 (CRN 93398)

Fall Semester 2009

Meets 2:00 PM-4:50 PM, Tuesdays

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Office Hours: 12:30-1:45 PM, Tuesdays, and by appointment. (I am often available many other times of the week. Simply email me or call me near the time when you'd like to meet.)

Readings and other materials on Scholar and from Project Muse (*Technology & Culture* articles from 1998 to present).

This graduate-level introduction to the history of technology focuses on the predominant themes that have been pursued by scholars during the past 40 years. For example, students will read several books and articles that employ a “contextualist” approach to history of technology—an approach that examines hardware and artifacts within a context of public policy, economics, and society in general. Students will also evaluate criticisms of the historiographical approaches in the discipline and look at studies that have sought to remedy thematic and methodological imbalances.

While the course may focus on the principles, theories, and methodologies of scholarly research and presentation in the history of technology, it depends largely on the reading of lively examples of historiographical approaches. Because of the professor's research interests, the class will therefore read about subjects in the history of American technology. Topics include the history of mass production, the nature of invention, the relationship between business institutions and technology, electrification in America, public policy, the changing relationship between technology and humans in warfare, and the technological “revolution” in the home.

On a highly practical level, this course seeks to help students become better analytical thinkers, writers, and communicators. The course involves extensive reading and writing as well as public speaking. Skills honed in the course will serve students well in academic and other professions. Students will also learn about the inner workings of a professional society, due to the professor's service as an executive officer of the Society for the History of Technology.

Though historical methods will be stressed in the course, non-history students should find this course useful for providing an understanding of technology and its interactions in society. In previous years' classes, students have come from the disciplines of Science and Technology Studies (STS), History, Technology Education, Curriculum & Instruction, Chemistry, Physics, Biology, Engineering, and Forestry.

Class Schedule

Aug. 25. 1. Introduction to the course, requirements, etc.

Sept. 1 . 2. Background to the history of technology: basic themes and resources of the profession. Readings: Staudenmaier, Hughes (#1), Smith, Kranzberg, Seely, Ceruzzi, Misa, and Nye (#1) articles. Recommended (esp. to non-STS students): Ferguson book, chs. 1-3. **Ass. #1.**

John M. Staudenmaier, *Technology's Storytellers: Reweaving the Human Fabric* (Cambridge, MA: MIT Press, 1985), Introduction and chapter 1, pp. xiii-34.

Thomas P. Hughes (#1), “Emerging Themes in the History of Technology,” *Technology and Culture* 20 (1979): 697-711.

Merritt Roe Smith and Steven C. Reber, “Contextual Contrasts: Recent Trends in the History of Technology,” in Stephen H. Cutcliffe and Robert C. Post, eds., *In Context: History and the History of Technology* (Research in Technology Studies, vol. 1), (Bethlehem, Lehigh University Press, 1989), pp. 133-49.

Melvin Kranzberg, “Technology and History: 'Kranzberg's Laws',” *Technology and Culture* 27 (1986): 544-60.

Bruce E. Seely, “SHOT, the History of Technology, and Engineering Education,” *Technology and Culture* 36 (October 1995): 739-72.

Fun and quick to read

Paul E. Ceruzzi, “Moore's Law and Technological Determinism: Reflections on the History of Technology,” *Technology and Culture* 46 (July 2005), pp. 584-93. Project Muse

Thomas J. Misa, “The Compelling Tangle of Modernity and Technology,” in Thomas J. Misa, Philip Brey, and Andrew Feenberg, eds., *Modernity and Technology* (Cambridge, MA: MIT Press, 2003), pp. 1-30 (focus on pp. 1-15).

David Nye (#1), "Technology," unpublished paper from Dr. Nye's website, http://www1.sdu.dk/Hum/amstud/staff/david_nye.htm.
Optional throughout course: Robert G. Ferguson, *People in the Machine: A Textbook for Studying Technology and Society*, online textbook produced by Dr. Ferguson at the Hong Kong Institute of Technology, 2001.

Sept. 8 . 3. The American system of manufacturing. Reading: Hounshell book.

Sept. 15. 4. Social history of technology I. The electrification of America. Reading: Nye book. **Ass. #2.**

Sept. 22. 5 History and policy: Applying the lessons of history. Ass. #3.

Read one of Stearns' articles:

Peter N. Stearns, "Applied History and Social Science," *Social Science History* 6 (No. 2, 1982): 219-26.

Peter N. Stearns, "History and Policy Analysis: Toward Maturity," *The Public Historian* 4 (No. 3, 1982): 4-29.

Read these three:

Otis L. Graham, Jr, "The Uses and Misuses of History: Roles in Policymaking," *The Public Historian*, 5 (No. 2, 1983): 5-19.

Hugh Davis Graham, "The Stunted Career of Policy History: A Critique and an Agenda," *The Public Historian* 15 (No. 2, 1993): 15-37.

Julian E. Zelizer, "Clio's Lost Tribe: Public Policy History Since 1978," *Journal of Policy History* 12 (No. 3, 2000): 369-94.

Optional/skim:

Julian E. Zelizer, "Introduction: New Directions in Policy History," *Journal of Policy History* 17 (No. 1, 2005): 1-11.

Wiebe E. Bijker, "The Need for Public Intellectuals: A Space for STS," *Science, Technology, & Human Values* 28 (No. 4, 2003), 443-50.

Guiding questions: Why has policy history (and applied history) been viewed so negatively at times by traditional historians? What value can policy historians offer to 1) other historians and 2) policy makers? What potential ("real-world") value does policy history offer? Can historians of technology (and STS people in general) offer more to the real world than can traditional policy historians?

Sept. 29. 6. The meaning and rhetoric of "technology." Readings: Schatzberg, Marx (#1), Nye (#2), and Kline (#1). Recommended: Kline (#2) and Marx (#2). Also, find another article relating to this topic (perhaps by looking at some of the references in the assigned readings).

Eric Schatzberg, "Technik Comes to America," *Technology and Culture* 47 (2006): 486-512.

Leo Marx (#1), "The Idea of 'Technology' and Postmodern Pessimism," in Merritt Roe Smith and Leo Marx, eds., *Does Technology Drive History? The Dilemma of Technological Determinism* (Cambridge, MA: MIT Press, 1994), pp. 237-57.

David E. Nye (#2), "Technology and the Production of Difference," *American Quarterly* 58 (2006): 597-618.

Ronald R. Kline (#1), "Cybernetics, Management Science, and Technology Policy: The Emergence of 'Information Technology' as a Keyword, 1948-1985," *Technology and Culture* 47 (2006): 513-35.

Ronald Kline (#2), "Constructing 'Technology' as 'Applied Science': Public Rhetoric of Scientists and Engineers in the United States, 1880-1945," *Isis* 86 (1995): 194-221.

Leo Marx (#2), "Technology: The Emergence of a Hazardous Concept," *Social Research* 64 (Fall 1997): 965-89.

Oct. 6. 7. System building, momentum, and the social construction of technology. Readings: Bijker, Pinch, Hughes (#2), Hughes (#3), Noble, and Tauritz articles. (Mini-discussion by Hirsh on doing presentations.)

Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, 1987, "Introduction," pp. 9-15.

Trevor J. Pinch and Wiebe E. Bijker, "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other," in Bijker, *Ibid*, pp. 18-50.

Thomas P. Hughes, (#2) "The Evolution of Large Technical Systems," in Bijker, *Ibid*, pp. 51-82.

Thomas P. Hughes, (#3), "Technological Momentum," in Merritt Roe Smith and Leo Marx, eds., *Does Technology Drive History? The Dilemma of Technological Determinism* (Cambridge, MA: MIT Press, 1994), pp. 101-13.

David F. Noble, "Social choice in machine design: the case of automatically controlled machine tools," in Donald MacKenzie and Judy Wajcman, eds., *The Social Shaping of Technology*, 2nd ed. (Buckingham: Open University Press, 1999,) pp. 161-76.

Lara Tauritz, "Sitting Pretty: Social Construction of the Ergonomic Desk Chair," paper presented at the 2001 SHOT annual meeting.

Oct. 13. 8. Student presentations. Ass. #4 for students making presentations. **Ass. #5** for others.

Oct. 20. 9. Social history of technology II: Gender and technology. Readings: Cowan book and Wajcman article. Recommended: Parr.

Judy Wajcman, "Feminist Theories of Technology," in Sheila Jasanoff, Gerald E. Markle, James C. Petersen, and Trevor Pinch, eds., *Handbook of Science and Technology Studies*, rev. ed., (Thousand Oaks, CA: Sage, 1995), pp. 189-204.

Joy Parr, "Ruth Schwartz Cowan, More Work for Mother," *Technology and Culture* 46 (July 2005): 604-12.

- Oct. 27** **10. Politics, appropriate technology, and “post-modernism.”** Readings: Pursell (#1) and Lovins (#1), Winner (#1), Laird, and Homer-Dixon articles. Optional: Lovins (#2) article. **Ass. #6.**
 Carroll Pursell (#1), “The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985,” *Technology and Culture* 34 (1993): 629-37.
 Amory B. Lovins (#1), “Energy Strategy: The Road Not Taken?” *Foreign Affairs* 55 (October 1976): 65-96.
 Langdon Winner (#1), “Do Artifacts have Politics?” from Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (Chicago: University of Chicago Press, 1986).
 Frank N. Laird, “Constructing the Future: Advocating Energy Technologies in the Cold War,” *Technology and Culture* 44 (2003): 27-49.
 Thomas Homer-Dixon, “The Rise of Complex Terrorism,” *Foreign Policy* (January/February 2002): 52-62, at http://www.foreignpolicy.com/issue_janfeb_2002/homer-dixon.html.
 Amory B. Lovins (#2) and L. Hunter Lovins, “Brittle Times, RMI’s Response,” *RMI Solutions Newsletter* 17 (Fall 2001), pp. 1-3 at <http://www.rmi.org/sitepages/art7048.php>.
 Optional (and lots of fun, especially after reading the Winner piece):
 Steve Woolgar and Geoff Cooper, “Do Artefacts Have Ambivalence? Moses’ Bridges, Winner’s Bridges and other Urban Legends in S&TS,” *Social Studies of Science* 29 (June 1999): 433-49.
- Nov. 3** **11. Social History of Technology II.5: Gender and technology.** Readings: Pursell (#2), Maines (#1) and (#2), Williams, and Tone articles. Recommended: Ferguson book, ch. 8. Also, find at least one article on this topic. **SP**
 Carroll Pursell (#2), “The Construction of Masculinity and Technology,” *Polhem* (1993): 206-19.
 Rachel Maines (#1), “Socially Camouflaged Technologies: The Case of the Electromechanical Vibrator,” *IEEE Technology and Society Magazine* 8 (June 1989): 3-11, and 23.
 Preface to Rachel P. Maines (#2), *The Technology of Orgasm: Hysteria, the Vibrator, and Women's Sexual Satisfaction* (Baltimore: Johns Hopkins University Press, 1999), pp. ix-xvi.
 Rosalind Williams, “The Political and Feminist Dimensions of Technological Determinism,” in Merritt Roe Smith and Leo Marx, eds., *Does Technology Drive History? The Dilemma of Technological Determinism* (Cambridge, MA: MIT Press, 1994), pp. 217-35.
 Andrea Tone, “Making Room for Rubbers: Gender, Technology, and Birth Control Before the Pill,” *History of Technology* 18 (2002): 51-76.
- Nov. 10.** **12. Student presentations.** **Ass. #4** for students making presentations. **Ass. #5** for others.
- Nov. 17** **13. Science-Technology Relationship.** Readings: Layton, Wise, Mayr, Ehlers, and Sclove articles. Recommended: Ferguson book, ch. 5. Also, find at least one article on this topic. **SP**
 Edwin Layton, “Mirror Image Twins: The Communities of Science and Technology in 19th Century America,” *Technology and Culture* 12 (1971): 562-80.
 George Wise, “Science and Technology,” *Osiris* 1, second ser., (1985): 229-46.
 Otto Mayr, “The Science-Technology Relationship as a Historiographic Problem,” *Technology and Culture* 17 (1976): 663-73.
 Representative Vernon J. Ehlers, “Unlocking Our Future,” in AAAS, *Science and Technology Policy Yearbook 1999*, <http://www.aaas.org/spp/yearbook/chap4.htm>.
 Richard E. Sclove, “For U.S. Science Policy, It’s Time for a Reality Check,” AAAS, *Science and Technology Policy Yearbook 1999*, <http://www.aaas.org/spp/yearbook/chap5.htm>.
- Nov. 24.** Unannounced mandatory exam for entire class period. No studying permitted. Attendance is voluntary.
- Dec. 1.** **14. Historical studies of failed technologies.** Readings: Lipartito, Staudenmaier (#2), and Perrow. Also, find at least one article on this topic. **SP**
 Kenneth Lipartito, “Picturephone and the Information Age: The Social Meaning of Failure,” *Technology and Culture* 44 (2003): 50-81.
 John M. Staudenmaier (#2), *Technology's Storytellers: Reweaving the Human Fabric* (Cambridge, MA: MIT Press, 1985), pp. 174-76.
 Charles Perrow, *Normal Accidents: Living with High-Risk Technologies* (New York: Basic Books, 1984), introduction, pp. 3-14.
- Dec. 8.** **15. Criticisms of the history of technology, different voices, and course review.** Readings: Staudenmaier (#3) article, Douglas, and Fouché. **Ass. #7** due today (for discussion in class).
 John M. Staudenmaier (#3), “Rationality, Agency, Contingency,” in *Recent Trends in the History of Technology Reviews of American History* 30 (2002): 168-81.
 Susan J. Douglas, “The Turn Within: The Irony of Technology in a Globalized World,” *American Quarterly* 58 (2006): 619-38.
 Rayvon Fouché, “Say it Loud, I’m Black and I’m Proud: African Americans, American Artifactual Culture, and Black Vernacular Technological Creativity,” *American Quarterly* 58 (2006): 639-61.

Possible topics:

P1. History of Military Technology. Reading: Mindell book and Knowles article or another article of your choice dealing with the theme of the day.

Anne Kelly Knowles, "Labor, Race, and Technology in the Confederate Iron Industry," *Technology and Culture* 42 (2001): 1-26.

P2. Technology out of control? Winner (#2) and (#3), and Hong articles. Also, find at least one article on this topic.

Langdon Winner (#2), *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (Cambridge, MA: MIT Press, 1977 (Chapter 7: "Complexity and the Loss of Agency," pp. 279-305.

Langdon Winner (#3), "Prophets of Inevitability," *MIT's Technology Review* 101 (March-April 1998): 62.

Sungook Hong, "Unfaithful Offspring? Technologies and Their Trajectories," *Perspectives on Science* 6 (Fall 1998): 259-.

Assignments

1. Choose an article from *Technology and Culture* that illustrates one of the themes from our readings. (The Ceruzzi article we read for the first class serves as a good example of such an article.) In a short paper (400 words), explain how the author presents the theme and makes a significant historical argument. How well does the author present the thematic significance? Be prepared to discuss your paper in class.

2. Find three reviews of Nye's book and summarize (in 400 words) the comments and criticisms of the book. What common features do the reviews share? How do they differ? How do you explain the similarities and differences? Also, based on your experiences outside this course, discuss whether you agree with the reviewers or not. Did the reviewers (or author) omit to consider significant themes?

3. Locate and read an article that deals with history of science or technology policy in a field that interests you (such as energy, communications, information technology, etc.). Analyze the article by dealing with the following concerns: 1) Describe the general "story" presented in the article. 2) What lesson does the author offer about the nature of policy? 3) Which theme or themes (derived from your readings, especially Zelizer [2000]) does this article exemplify? 4) Does this article have value to nonhistorians (i.e., policy makers)? 5) How should the author strive to make that value available to the policy maker? Paper length: 400 words.

4. Students will choose one Dexter/Edelstein Prize-winning book and write a critical review. Aside from the normal book review (not a book report—see appendix), you should discuss such things as: What made the book a winner? What broad themes did it develop? What new interpretations did the author advance? Also, read and comment upon at least two published reviews of the book. Feel free to be critical of the Dexter/Edelstein Prize Committee choice, and employ analytical techniques you have developed elsewhere. Paper length: 500 words.

All students will present their reviews to the class. Presentations should be timed to last 20 minutes. Moreover, each student will condense his or her written report into a 250-word summary for distribution to the entire class. (Write a summary—not an outline.) Three or four students will make presentations on each of the two days listed in the class schedule (above). The remaining students will present their reviews at the end of "normal" classes, after we discuss the subject listed. These classes are marked "**SP**" for "student presentation."

5. In an earlier assignment, you wrote a critical review of a recent book in the history of technology. In this assignment, you will analyze the other main form of scholarly expression—the research article.

Each year, the Society for the History of Technology awards the Usher Prize for the best scholarly work published in *Technology and Culture* during the preceding three years. Select a group of two or more of these award-winning articles and characterize the traits of the articles that contributed to their success. In other words, by offering examples, you will describe the positive qualities common to good research articles. No more than half of your report should be devoted to summarizing the content of the articles. Please spend most of your effort examining such matters as: uses of evidence; forms of argument or types of logic; ways of stating problems, questions, or theses; styles of presentation; and interpretive strategies or approaches (i.e., historiographic, methodological, or philosophical presuppositions). Why did these articles beat other articles written during the same year? Try to reach some general conclusions about what constitutes an exemplary research article. As always, feel free to employ skills you developed in other contexts.

The paper should contain 500 words. Include bibliographic citations of the articles (but don't include them in the word count.)

6. Locate and read two articles dealing with “post-modernism” to gain familiarity with how the concept has been applied to technological and capitalistic enterprises. [One possibility is a portion of David Harvey, The Condition of Postmodernity (Cambridge, MA: Blackwell, 1990).] Then find another article (or chapter of a book) dealing with the subject. Finally, write a 400-word essay explaining how you think (or don't think) the concept can be applied to arguments made by Lovins in this week's reading. Make sure to explain what you think “postmodernism” is before you argue that Lovins's argument is or is not part of the genre.

Alternative assignment: Examine the Lovins article in light of any other coherent interpretative theme that you choose. In other words, read and be critical of Lovins' article by looking at it through the lens of a scholar who pursues interests in Marxism, feminism, environmentalism, political philosophy, or whatever.

7. Here is an assignment to be thinking about throughout the entire term. Write a short paper on how you think the history of technology fits into science and technology studies. The paper is intended to be integrative. Use experience from other courses, life, or whatever. Think broadly and write about what you think are the major issues in the STS field and how studies in the history of technology can (or cannot) help address those issues. You do not need to do extensive research outside of what you have already read in this (and other courses). Feel free to be speculative and critical. This 500-word paper is due on the last class meeting, and it will be discussed as part of the class. If you are not an STS student, explain how history of technology fits into **your** program of study.

Note: For **all** assignments, include footnotes or a short bibliography of readings you have used for writing your papers.

ALTERNATIVE ASSIGNMENT, INSTEAD of assignments 6 and 7. If you would like to explore in detail some theme that we have studied this semester, you have the option of writing a more classical “term paper” for this course. In that paper, you can choose almost any topic (after consulting with the professor) in the social studies of technology, and write a 10-page paper (word count 2,500). The paper should be extensively documented (with footnotes or endnotes) and should serve as the basis for a publishable article or thesis later in your graduate career. The paper is due on the last day of class. Please also provide a 250-word abstract of your paper so we can discuss it.

General assignments

This is a seminar class, and its success depends largely on the participation of students. As noted by a colleague, Professor Robert Hatch of the University of Florida, the “[s]eminar discussion has a long tradition and is based on criteria not far removed from those of the 'critique.'” Professor Hatch provides a set of guidelines that you need to consider in all aspects of seminar communication and when preparing reviews of commonly read texts in this class. Read his criteria at <http://web.clas.ufl.edu/users/rhatch/pages/02-TeachingResources/readingwriting/05surviv.htm>.

For each class, every student should be prepared to discuss all the readings. Moreover, each student will chose (or will be assigned) one reading (or one part of the readings). He or she should be especially well prepared to

- summarize the reading,
- discuss the major themes and significance of the reading,
- provide a critique of the reading, noting the author's use of evidence and his/her success in arguing from it.
- speculate on how the themes and approaches could be used as the basis of a future research project.

(As an alternative to this approach, we will experiment with allowing two students manage all the readings and rotate that task among all students throughout the semester.)

Students may also want to perform supplementary reading to answer the following questions: With what other work in the profession does the reading compare? Which work makes its points better? Why? In all of the above, two students may collaborate on the same assignment. In the “real” academic world, it is common for people to work together on a project. Here is a way to get some experience.

Word counts and “to be”

Include a word count at the end of each written assignment. (Penalty for none: 5 points.) This strict word-length requirement will help you write clearly and concisely—something that is greatly appreciated in the “real world.” For extra assistance in reaching this goal, see Jacques Barzun, *Simple and Direct*, a wonderful and easy-to-read primer on good writing. (Penalty for papers +/- 10%: 5 points for each 10% increment.)

In each of the shorter assignments (500 words or less), you will lose 0.5 point for using the verb “to be” in any of its forms more than three times. (“To be” is the infinitival form of “am,” “is,” and “are” in all tenses.) In the alternate final assignment, you may use the verb three times per 500 words (15 times for a 2,500-word paper). By consciously avoiding the verb, you will choose more active verbs that yield more interesting papers. Also, make sure you read the PDF chapter by C. Edward Good on “to be.” (Penalty beyond the limit: 0.5 point per use of “to be.”) For more style tips, see Barzun’s book and Hirsh’s writing tips (<http://www.history.vt.edu/Hirsh/writtips.html>).

Due dates

Due dates for assignments are strict. Late work will be penalized 10 points per calendar day (weekends included) unless extenuating circumstances have been discussed with me before the due date. (Obviously, some extenuating circumstances cannot be foreseen, and they will be dealt with on a case-by-case basis. But please realize that a disk-drive failure that wipes out your paper does not constitute an extenuating circumstance. Make sure you keep backup copies of your work on CDs, memory sticks, etc.) Put these due dates on your calendar and plan your lives accordingly. In the “real world,” missing a deadline often means losing one's job.

Grades

Each student should attend all discussions and be prepared to participate fully. In fact, due to the small size of the class, participation will be necessary to avoid reliance on the professor to lecture.

Grades will be assigned using the approximate formula:

| | |
|--------------------------------|-----|
| Assignments 1-6 (12.5% each) | 75% |
| Assignment 7 | 15% |
| (Alt. final assignment: 27.5%) | |
| Class participation: | 10% |

The instructor is amenable to changes in topics and other ideas suggested by students. He expects the students to “make or break” the course. In other words, the success of the course depends much on the attitudes and enthusiasm of the students.

Books to be Read

Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983). Paperback. ISBN: 0465047327, 13 digit: 978-0465047321.

David A. Hounshell, *From the American System to Mass Production, 1800-1932: Development of Manufacturing Technology in the United States* (Baltimore: Johns Hopkins University Press, 1984). Paperback. ISBN: 080183158X, 13 digit: 978-0801831584.

David E. Nye, *Electrifying America: Social Meanings of a New Technology* (Cambridge, MA: MIT Press, 1992). Paperback. ISBN: 0262640309, 13 digit: 9780262640305.

Recommended for help in writing: Jacques Barzun, *Simple and Direct* (New York: HarperCollins/Quill, 2001). Paperback. ISBN: 0060937238.

Possible book for class; don't purchase yet: David A. Mindell, *War, Technology, and Experience aboard the USS Monitor* (Baltimore: Johns Hopkins University Press, 2000). Paperback. ISBN: 0801862507, 13 digit: 9780801862502.

Readings (besides published books) that you may enjoy (none are required reading)

- C. Edward Good, *A Grammar Book for You and I—Oops, Me!* (Sterling, VA: Capital Books, 2002), chapter 12, “Word War II: To Be or Not To Be,” pp. 219-25.
- Lara Freidenfelds, “Technology and the Production of Gendered and Classed Subjects: Tampons in the Twentieth Century United States,” paper presented at the 2001 SHOT Annual meeting.
- Nina E. Lerman, Arwen Palmer Mohun, and Ruth Oldenziel, “Versatile Tools: Gender Analysis and the History of Technology,” *Technology and Culture* 38 (January 1997): 1-8.
- Book reviews of *His and Hers: Gender, Consumption, and Technology*, by Martina Hessler in *Technology and Culture* 40 (1999): 875-878; and by A. Fuat Firat in *NWSA Journal* 11 (1999): 176-84.
- John Marburger, Director, Office of Science and Technology Policy, Executive Office of the President, “Science and Technology in a Vulnerable World: Rethinking our Roles.” Keynote Address at 27th Annual AAAS Colloquium on Science and Technology Policy, 11 April 2002, Washington, D.C., http://www.ostp.gov/html/02_4_15.html (obtained 4/24/02).
- Robert E. Kohler, “The Interaction of Science and Technology in the Industrial Age, Forward,” *Technology and Culture* 17 (1976): 621-3.
- David A. Hounshell, “Hughesian History of Technology and Chandlerian Business History: Parallels, Departures, and Critics,” *History and Technology* 12 (1995): 205-224.

Appendix: Purpose of a Book Review

A book review is a standard way for an academic to analyze and criticize the work of other scholars. It is not, however, a “book report,” which simply re-tells the story contained in the book. The review may summarize the book's contents, but more importantly, it reviews the book's thesis and interpretations.

The purpose of a review is:

- 1) to analyze the validity of the work's main concepts;
- 2) to criticize (positively or negatively) the book's main thesis. For the scholarly community, the review serves as a major tool by which research is assessed.

The reviewer must not be afraid to evaluate a respected author even though he or she appreciates the effort that has gone into a major work. One can evaluate a book by many methods, of which comparison is the most common. In other words, the reviewer can compare one work to another which has a related thesis, interpretation, or subject matter. Praise or criticism should be backed up with relevant support from these other works.