Computing and American Culture Since World War II

Communication 320:
Topics in Media and Cultural History
Winter Quarter, 2013

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Seminar Goals:

Over the last fifty years, computers and American society have undergone a mutual transformation. The huge machines that once lurked in the basements of government research laboratories have become the desktop models of home and school, and lately, gateways to the World Wide Web. The American economy has likewise become increasingly devoted to the production and circulation of information goods – and to the computerizing of industrial processes as well. According to scholars and pundits alike, these shifts in the technological and economic realms have spawned new forms of self and community, new ways of working and new, virtualized places in which to live and labor.

In this course, we will examine these claims with an eye to understanding the ways in which computers have become symbolic as well as material forces in American culture. We will begin with the assumption that there is no necessary relationship between information technologies and the social visions to which they have become attached. We will then explore the ways in which those relationships have been constructed within three distinct cultural paradigms: the "closed world" framework of the Cold War, the "open world" vision of the 1960s counterculture, and the "network society" paradigm of the Internet era we now inhabit. We will ask, how have shifts in our view of computing been related to shifts in our view of the ideal form of self and community, economy and government? What roles have computers and information played as symbols in American cultural life since World War II? How have those roles affected both American culture and digital technologies? And how have cultural shifts affected our vision of what digital technologies and an informated economy could become?

By the end of the course, you should have both an overview of the shifting politics of information technologies in American culture and a solid grasp of theories and methods for teasing out the complex relationships between technological and cultural change.

Readings:

   We will frame our investigations by reading key scholarly accounts of the periods in question. The recommended readings are designed to give you further resources for exploring the historical and/or theoretical dimensions of each week's work.

Required Texts:

Edwards, Paul N. *The Closed World: Computers and the Politics of Discourse in Cold War America*. Cambridge, MA: MIT Press, 1996

Wiener, Norbert. *The Human Use of Human Beings: Cybernetics and Society*. New York, N.Y.: Da Capo Press, 1988.

Martin, Reinhold. *The Organizational Complex: Architecture, Media, and Corporate Space*. Cambridge, MA: MIT Press, 2003.

Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books, 1973. (any edition ok)

Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: University of Chicago Press, 2006)

Castells, Manuel. *The rise of the network society*. Cambridge, Mass.: Blackwell Publishers, 2000. (Note: Double-check edition: you need the 2000 edition, not the 1996)

Coleman, E. Gabriella. *Coding Freedom: The Ethics and Aesthetics of Hacking*. Princeton and Oxford: Princeton University Press, 2012.

Henry Jenkins, *Convergence Culture* (Cambridge: MIT Press, 2006)

Galloway, Alexander R. *Gaming: Essays on Algorithmic Culture*. Minneapolis: University of Minnesota Press, 2006.

Zittrain, Jonathan. *The Future of the Internet and How to Stop It*. New Haven Conn.: Yale University Press, 2008.

Requirements and Expectations:

Class Discussion:

You'll need to come to class with the reading done and several questions in mind for discussion. Try to think of class meetings as a resource session in which you can get your questions answered and at the same time, learn what questions are driving your fellow students.

"Opening" a Text for Class Discussion: *Due Date TBA*

At some point in the course, you will be asked to "open" a text for class discussion. This is a more formal proposition than it may sound. To do it effectively, you will need to be able to summarize the key arguments of the text and suggest how they connect to themes in our ongoing discussion. You will also need to identify and propose key questions for subsequent discussion.

The Research Project:

Over the course of the quarter you will complete a research paper of 15-20 pages. The paper is designed to help you analyze core themes in the course, practice dealing with primary materials, and develop a background in the area that will allow you to pursue more in-depth research projects in the future. You may choose one of three models in building your project. All three require a mid-term proposal. One tip: it's always a good idea to check ideas you're thinking about with me or your classmates before developing a full proposal. It's also a very good idea to look ahead in the syllabus and get started early.

Model 1: Historical

Identify a group of people, texts or artifacts within any one of the three periods we've studied and analyze the roles played by information and/or information technology in organizing their perceptions of self, community, and work. Based on your analysis, how should we understand the relationship of information and information technology to processes of social and cultural change?

Model 2: Comparative

Choose a single concept that appears in each of the three periods under consideration (such as "virtuality" or "information") and compare its deployment across the three periods. Based on your analysis, what accounts for the shifts in the meanings of this idea? What do these shifts tell you about the relationship of information and information technology to processes of social and cultural change?

Model 3: Your Call

I'm open to other questions and approaches for a final project. For your mid-term proposal, submit a detailed written proposal explaining the project, how it relates to the course, and why it is preferable to the other two options. As with the other models, be sure to include a literature review. (Note: This option is particularly appropriate for late-stage graduate students who may have substantial projects already under way and who may want to link issues in the course to those projects.)

The Midterm Presentation and Proposal:

Preliminary Presentation Due February 7

Based on your notes for your written proposal, give a 10-minute presentation on your research to the class. Tell us what your core questions are, what artifacts or communities or texts you will be looking at and how, and give us some sense of the likely pay off for your work, empirically and analytically. The class will give you feedback which you will likely then want to incorporate into your written proposal.

Written Proposal Due February 14

Write a 4 to 5-page proposal for your project. The proposal should include:

1. A description of your object of study, its significance, and the fundamental issues or questions you want to address in your research. Do you have a novel approach or hypothesis? What is it?

2. A brief, tightly-focused review of the scholarly literature on your topic. This review should deal with the key works in your own narrow area, but should also deal with any important research on your topic carried out in other fields. You should explain how your work will relate to the works you cite.

3. A brief discussion of research methods. What kind of research methods will you use to answer the questions you've posed or to test your hypothesis? Textual analysis? Archival research? Interviews? Why are those the best methods for this case? What will they allow you to see? Do you need any special resources to complete your research? And are they available locally?

4. A timetable. What are the key parts of your project (research, writing, etc.) and by when will you have them completed?

The Final Paper: *Due by 5 PM Thursday March 21*
Please submit Microsoft Word files by email attachment

Grading:

Class Participation (including opening a text): 30%

Midterm proposal: 20%

Final Project: 50%

PART 1: THE CLOSED WORLD: INFORMATION, TECHNOLOGY AND THE COLD WAR

Week 1 – January 10: **Introductions: Computing and Cultural Theory**

Williams, Raymond. "Base and superstructure in Marxist cultural theory (rpt. from Williams, Raymond, *Problems in materialism and culture. London:Verso, 1980, 31-49)." Rethinking popular culture: contemporary perspectives in cultural studies*. Eds. Chandra Mukerji and Michael Schudson. Berkeley: University of California Press, 1991. 407-423.

Edwards *The Closed World*, Chapters 1-5

Ensmenger, Nathan. "Power To The People: Toward a Social History of Computing" http://www.sas.upenn.edu/~nathanen/files/ensmenger-26-1.pdf

Recommended:

Carey, James W. "Technology and Ideology: The Case of the Telegraph," *Communication as Culture: Essays on Media and Society* (New York: Routledge, 1992): 201-230

Thompson, John B. *Ideology and modern culture: critical social theory in the era of mass communication*. Stanford, Calif.: Stanford University Press, 1990.

Foucault, Michel. "Two lectures." *Culture/power/history: a reader in contemporary social theory*. Eds. Nicholas B. Dirks, Geoff Eley and Sherry B. Ortner. Princeton: Princeton University Press, 1994: 200-221.

Week 2: January 17: **Cybernetics: Linking Machine Culture and Research Culture**

Required Readings:

Langdon Winner, "Technologies as Forms of Life" in *The Whale and the Reactor*, pp. 3-18

Norbert Wiener, *The Human Use of Human Beings*. Ch's 1-3, 5

Bowker, Geof. "How to Be Universal: Some Cybernetic Strategies, 1943-1970." *Social Studies of Science* 23 (1993): 107-27.

Galison, Peter. "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision." *Critical Inquiry* 21, no. Autumn (1994): 228-266.

Recommended Reading:

Chun, Wendy Hui Kyong. *Control and Freedom: Power and Paranoia in the Age of Fiber Optics*. Cambridge, Mass.: MIT Press, 2006.

Hayles, *How We Became Post-Human* (esp. ch. 4 "Liberal Subjectivity Imperiled: Norbert Wiener and Cybernetic Anxiety")

Edwards, "The Machine in the Middle," ch. 6 of *The Closed World*

Berkeley, Edmund Callis. *Giant Brains; or, Machines That Think*. New York,: Wiley, 1949.

Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics*. Cambridge: MIT Press, 2002.

Week 3 – January 24: Computing and Cold War Aesthetics

Required:

Martin, *The Organizational Complex*, Chapters 1,2 & 5

Colomina, Beatriz. "Enclosed by Images: The Eameses' Multimedia Architecture." *Grey Room* 2, no. Winter (2001): 6-29.

Spigel, Lynn. "Outer Space and Inner Cities: African-American Responses to NASA," in Spigel, *Welcome to the Dreamhouse: Popular Media and Postwar Suburbs*, *Console-Ing Passions*. Durham, NC: Duke University Press, 2001: 141-182.

Recommended:

The films of Ray and Charles Eames (on DVD, at SUL)

Colomina, Beatriz. *Domesticity at War*. Cambridge, Mass.: MIT Press, 2007.

Colomina, Beatriz, Annmarie Brennan, and Jeannie Kim. *Cold War Hothouses: Inventing Postwar Culture from Cockpit to Playboy*. 1st ed. New York: Princeton Architectural Press, 2004.

Light, Jennifer S. *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America*. Baltimore: Johns Hopkins University Press, 2003.

PART 2: THE OPEN WORLD: INFORMATION, TECHNOLOGY AND THE COUNTERCULTURE

Week 4 – January 31: **Countercultural Cybernetics: Visions of Media and Technology**

Fred Turner, *From Counterculture to Cyberculture*, Chicago: University of Chicago Press, 2006: Chapters 1-3

Kreiss, Daniel. "Appropriating the Master's Tools: Sun Ra, the Black Panthers, and Black Consciousness, 1952-1973." *Black Music Research Journal* 28, no. 1 (2009): 57-81.

Recommended reading:

Buckminster Fuller, *Operating Manual for Spaceship Earth* (1969)

Rayvon Fouché. "Say It Loud, I'm Black and I'm Proud: African Americans, American Artifactual Culture, and Black Vernacular Creativity." *American Quarterly* 58, no. 3 (2006): 639-61. Available online via Project Muse.

Star, Susan Leigh, and James Greisemer. "Institutional Ecology, Translations, and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-1939." *Social Studies of Science* 19, no. 387-420 (1989): 387-420.

Peter Galison, "Trading zone: coordinating action and belief.*" The science studies reader.* Ed. Mario Biagioli. New York and London: Routledge, 1999. 137-160

David Farber, "The intoxicated state/illegal nation: drugs in the sixties counterculture." Imagine Nation. Eds. Peter Braunstein and Michael William Doyle. New York: Routledge, 2002. 17-40

Braunstein, Peter, and Michael William Doyle. "Introduction: historicizing the American counterculture of the 1960s and '70s." *Imagine Nation*. Eds. Peter Braunstein and Michael William Doyle. New York: Routledge, 2002. 5-14.

Week 5 – February 7: The Information Society Paradigm and the Critique of Technocracy

In Class: Present Research Proposals

Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books, 1973. Read Introduction, Chapters 2, 3, 6, Coda

Recommended:

Daniel Bell, "The social framework of the information society." *The computer age: a twenty-year view*. Eds. Michael Dertouzos and Joel Moses. Cambridge, MA: MIT Press, 1979: 163-211

Ensmenger, Nathan. *The Computer Boys Take Over: Computers, Programmers, and the Politics of Technical Expertise*. Cambridge, Mass.: MIT Press.

Theodore Roszak, *The making of a counter culture: reflections on the technocratic society and its youthful opposition.* Berkeley: University of California Press, 1969/1995 Introduction, Preface, Chapters 1, 2, 7, 8

Herbert Marcuse, *One dimensional man: studies in the ideology of advanced industrial society*. Boston: Beacon Press, 1964 (esp. chapters 1 & 2).

Reich, Charles A. *The Greening of America* New York: Random House, 1970. Chapters 1, 2, 4, 6, 9, 11

Daniel Bell, *The Cultural Contradictions of Capitalism* New York: Basic Books, 1976.

Gouldner, Alvin Ward. *The future of intellectuals and the rise of the new class: a frame of reference, theses, conjectures, arguments, and an historical perspective on the role of intellectuals and intelligentsia in the international class contest of the modern era.* New York: Oxford University Press, 1982.

Part 3: Networked Society, Networked Production

Week 6 – February 14: **The Network Society**

Research Proposals Due

Manuel Castells, *The Rise of the Network Society*, Second Edition, Selections:

> Prologue – all (pp.1-27)
> Ch. 1 – pp. 28-100 (skim)
> Ch. 3 – pp. 163-188, 206-215
> Ch.4 – 216-223, 255-267
> Ch. 6 -- 407-429, 440-459
> Conclusion & Summary: 500-512

Recommended:

Abbate, Janet. *Inventing the Internet*. Cambridge, Mass: MIT Press, 1999.

Saxenian, AnnaLee. *Regional advantage: culture and competition in Silicon Valley and Route 128*. Cambridge, Mass.: Harvard University Press, 1994.

Frank Webster, "Information, Restructuring and Globalization" pp. 59-96 and "Informational Capitalism," in *Theories of the Information Society* (2nd ed.), pp. 97-123

Week 7 – February 21: **Countercultural Networks of Production:**

Coleman, E. Gabriella. *Coding Freedom: The Ethics and Aesthetics of Hacking*. Princeton and Oxford: Princeton University Press, 2012.

Recommended Readings:

Kelty, Christopher M. *Two Bits: The Cultural Significance of Free Software*, Experimental Futures. Durham: Duke University Press, 2008

Ensmenger, Nathan. "Open Source's Lessons for Historians"
http://www.sas.upenn.edu/~nathanen/files/ensmenger-26-4.pdf

Benkler, Yochai. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven: Yale University Press, 2006.

Kreiss, Daniel, Megan Finn, and Fred Turner. "The Limits of Peer Production: Some Reminders from Max Weber for the Network Society." *New Media & Society* 13, no. 2 (2011): 243-59.

Langdon Winner, "Do Artifacts Have Politics?" *The Whale and the Reactor*, pp. 19-39

Lawrence Grossberg, "Articulation and Culture," *We Gotta Get Out of This Place*, pp. 37-67.

Fred Turner, *From Counterculture To Cyberculture*, Chapter 4, "Taking the Whole Earth Digital."

Eric S. Raymond, "The Cathedral and the Bazaar," available:
http://catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/

Tiziana Terranova, "Free labor: producing culture for the digital economy." Social Text 18.2 (2000): 33-58.

Kollock, Peter, and Marc A. Smith. *Communities in Cyberspace*. London ; New York: Routledge, 1999.

Walter Powell, "Neither market nor hierarchy: network forms of organization." *Research in Organizational Behavior* 12 (1990): 295-336.

Week 8 – February 28: Networked Mass Media:

Required:

Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press, 2006 (selections TBA)

Recommended:

Andrejevic, Mark. *Ispy: Surveillance and Power in the Interactive Era*. Lawrence, Kan.: University Press of Kansas, 2007.

Michael Hardt and Antonio Negri, "The Dangerous Classes," from *Multitude*, pp. 103-115 and 140-153.

Week 9 – March 7: **Culture as Infrastructure**

Required:

Galloway, Alexander R. *Gaming: Essays on Algorithmic Culture*. Minneapolis: University of Minnesota Press, 2006.

Recommended:

Bittanti, Matteo, ed. *Gamescenes: Art in the Age of Videogames* (Milan, Italy: Johan & Levi, 2006).

Bourriaud, Nicolas. *Relational Aesthetics*, Collection Documents Sur L'art. [Dijon]: Les Presses du réel, 2002.

Turner, Fred. "Burning Man at Google: A Cultural Infrastructure for New Media Production." *New Media & Society* 11, no. 1&2 (2009): 73-94.

Week 10 – March 14: **The Next Paradigm?**

Zittrain, Jonathan. *The Future of the Internet and How to Stop It*. New Haven Conn.: Yale University Press, 2008. (Selections to be announced)

Recommended:

Liu, Alan. *The Laws of Cool: Knowledge Work and the Culture of Information*. (Chicago: University of Chicago Press, 2004).

Terranova, Tiziana. *Network Culture: Politics for the Information Age*. (London ; Ann Arbor, MI: Pluto Press, 2004).

Fred Turner, *From Counterculture to Cyberculture*, Chapters 6-8.