FRS 129: Sex, Money and Rock and Roll: Information Technology and Society

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(Note to reader: This is a slightly cleaned version of a draft syllabus that evolved to some degree over the course of the semester as we added newly available readings, gained some new visitors, and refined weekly assignments.)

The aim of this seminar is to combine the perspectives of computer science and the social sciences to equip students with the expertise necessary to participate in the critical policy debates with which the U.S. and other societies are faced by the rise of the Internet as a major medium of communications and information.   Through a combination of readings, discussion, and hands-on activity, you will be encouraged, for each of the policy dilemmas that we confront, to a) identify the values that are at stake; b) clarify your own positions on these values; c) understand the range of technological solutions that constrain or facilitate different policy approaches; and d) understand the social and value implications of different policy prescriptions. What makes this course very different from all but a handful of courses on the Internet offered at universities throughout the world, is that we are committed to providing both kinds of tools one needs to address such questions: the computer science that lies behind the policy issues *and* the social science required to understand the technology's human impact.

Assignments, class lists, and other course-related paraphernalia will be available at the course web page, which you can reach through *www.frs129.org*.   To distribute materials, use the class e-list: *everyone@frs129.org*.   You are required to purchase only one book: *Code and Other Laws of Cyberspace* by Lawrence Lessig.   This is available at Micawber Books (at 110-14 Nassau Street, across from the University).   Other readings will be available on line or will be distributed.

Evaluation will be on the basis of: (a) Participation in seminar meetings (attendance is required); (b) timely completion of assignments; and (c) Completion of a research paper of at least 15 pages on a public policy issue related to the Internet.   There will be no mid-term or final examination (but we will meet during the exam period to share the results of the research projects).

Session 1 (Sept. 17): Technology in Historical Perspective
Assignments:

1. Manuel Castells. *The Internet Galaxy: Reflections on the Internet, Business, and Society.* New York: Oxford Univ. Press, 2001. Pp. 9-35: "Lessons from the History of the Internet."
2. Claude S. Fischer. *American Calling: A Social History of the Telephone to 1940.* Berkeley: University of California Press, 1992. Pp. 60-85: "Educating the Public" and pp. 175-92: "Becoming Commonplace."

Game Plan:
Pt. 1: Orientation and introductions
Pt. 2: The history of technology – 3 points and a few examples
Pt. 3: Computers and Internet technology in particular – 3 more points.
Pt. 4: What is inside of a computer box?
Pt. 5: Technologies and human values: What should we ask of the Internet?

Session 2 (Sept. 24). The Internet, Public Policy, and Social Choice
Assignments:
1. Lawrence Lessig, *Code and Other Laws of Cyberspace.* New York: Basic Books, 1999. Pp. 1-108.
2. Cass Sunstein, "The Daily Me," from *Republic.Com.* Princeton: Princeton Univ. Press (on-line at http://pup.princeton.edu/chapters/s7014.html).
3. After reading Lessig, write a brief (2-3 pp.) memorandum about a policy issue related to the Internet that you believe is particularly interesting and important, and distribute this through frs129@lists.princeton.edu. (Although you are free to change your mind, you may want to use this as the first iteration of your research-paper outline.)
4. If you have time, work on your home page (due next week).
Guest: Dr. W. Russell Neuman from the White House Office of Telecommunications Policy and the University of Michigan.
Game plan
Pt. 1 – Update on home page exercise
Pt. 2 – Brief presentations of policy issues from student memoranda
Pt. 3 – Internet policy from the federal vantage point – presentation by and discussion with Russ Neuman

Session 3 (Oct. 1) : Code and Other Laws of Cyberspace
Assignments.
1. Finish your home page
2. Review Lessig and spend some time with collection of policy-related materials (news articles, reports, etc.) available at the course web site.
3. Write 2 page prospectus for term project (what question you will answer and what you will do to answer it, with a concrete list of tasks and a schedule for completing them). (Both instructors will be available for meetings throughout the week.)

Game plan:
Pt. 1 – Recap on last week's meeting and discussion of Lessig readings

Pt. 2 – Levels of code and software development
Pt. 3 – Where and how Internet policy gets made
Pt. 4 – Discussion of term project ideas

Session 4: Open Source (Oct. 8)

Assignments.
1. Yochai Benkler, "The Battle over the Institutional Ecosystem in the Digital Environment." *Communications of the ACM* 44 (2), pp. 84-90 (February 2001).
2. Eric Raymond, "The Magic Cauldron" (June 1999).
3. Browse material in the folder on open source at the seminar web site.
Game plan:
Pt. 1. Visit from and discussion with Eric Raymond.
Pt. 2. Set up of search engine assignment for next week (distribute materials & search terms)

Session 5: The Commercialization of Cyberspace: (Oct. 15)

Assignments:
1. 4. Write 2-3 page memo on open source, based on last week's readings and discussions: What are the values and stake, and what are the practical issues in designing systems that sustain the values you consider important?
2. *Read*
        Michael Hiltzik, "Taming the Wild Wild Web." LA Times, July 2001. (Brief but useful.) http://www.xent.com/pipermail/fork/2001-July/002667.html
         Luc Introna and Helen Nissenbaum. 2000. "Shaping the Web: Why the politics of search engines matters." *The Information Society* 16.
http://www.slis.indiana.edu/TIS/articles/introna163.html
         Eszter Hargittai. 2000. "Open portals or closed gates? Channeling content on the World Wide Web." *Poetics.* 27: 233-253. Download .pdf version from
http://www.princeton.edu/~eszter/portals.html
         Kathy Wallman. 2001. "Uncle Sam and the Digital Economy." (very brief but very useful) Cnet.com March 22, 2001. http://news.com.com/2010-1078-281420.html
3. Visit http://www.yahoo.com/ and http://www.neopets.com/ – What strategies do the site designers use to keep visitors at their sites?
4. Read business plan/annual report/press reports for your search engine. Be prepared to report in class on the following: Within what universe of web pages does your search engine search and how does it identify those web pages? On what basis does it rank hits? Who owns the company? What is the company's business strategy? Is it working?   For each of three search terms (distributed in seminar last week) report on number of hits and print out the top 20.

Game plan:
Pt. 1: Recap discussion of Open Source issues
Pt. 2: Aspects of commercialization: Intellectual property/DMCA; Tracking, cookies and privacy; Attacting and keeping eyeballs; Advertising and business plans; Owning people (AOL)
Pt. 3: What are the values that public policy should seek to nurture in dealing with commercialization of the Web?
Pt. 4: Search engines: In-class demonstration and discussion of results of search-engine/portal research.

Session 6: Intellectual Property on the Internet (Oct. 22)
Assignments:
Note: Most of the sites below oppose DMCA and UCITA. This imbalance does not reflect the bias of the instructors, but rather reflects the different strategies used by proponents (quiet lobbying) and opponents (mass public opinion campaigns) of such legislation.
1. Read Lessig, *Code*, pp. 122-41 (ch. 10, "Intellectual Property)
2. Read Digital Millenium Copyright Act. On course web site or:
http://thomas.loc.gov/cgi-bin/t2GPO/http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_bills&docid=f:h2281enr.txt.pdf
Alternatively, you can read the shorter summary provided by the U.S. Copyright Office (link below) and just skim the legislation:
www.loc.gov/copyright/legislation/dmca.pdf
Other DMCA sites:
http://anti-dmca.org/
http://www.educause.edu/issues/dmca.html
http://www.eff.org/IP/DMCA/
http://www.tuxers.net/dmca/
3. Read UCITA
UCITA (model state law): http://www.law.upenn.edu/bll/ulc/ucita/ucita200.htm
Other UCITA sites:
http://www.badsoftware.com/uccindex.htm
http://www.cptech.org/ecom/ucita/#resources
http://www-affect@ucita.com/
http://www.consumerlaw.org/ucita/index.html
http://www.ala.org/washoff/ucita/index.html
4. Read KaZaa license: On course web site or at
http://www.cs.princeton.edu/courses/archive/fall02/frs129/KaZaaLicense
5. Peruse materials in folders on intellectual property, Net Radio and music downloads, DMCA, and UCITA at seminar web site.

Game plan:
Pt. 1: Technical issues – Napster v. KaZaa – MP3s, protocols, client servers vs. peer to peer, digitalization, broadband, and technical issues bearing on convergence

Pt. 2: DMCA – what does it do and does it do the right things? Does it embody the right values? What are its unanticipated consequences (for public goods? for free expression? etc.). Ditto UCITA. Will the Internet turn into cable TV? Would that be a bad thing?
Pt. 3: Set up for Sound Lab assignment for next week.

Week 7: Digital Divide (Nov. 5)

Assignments:
1. Write up sound lab exercise.
2. *Readings*:
Norris Dickard, "Federal Retrenchment on the Digital Divide: Potential National Impact." Benton Foundation Policy Brief #1, March 18, 2002.
http://www.benton.org/policybriefs/brief01.html
Sonia Arrison, "What Digital Divide?" C/Net News.Com, March 13, 2002, 4pm.
http://news.com.com/2010-1078-858537.html
Andrew Leigh and Robert D. Atkinson. 2001. "Clear Thinking on the Digital Divide." *PPI Policy Report*, June 2001. http://www.google.com/search?hl=en&lr=&ie=ISO-8859-1&safe=off&q=%22clear+thinking+on+the+digital+divide%22
3. Write down two empirical questions suggested by the readings (for example, things you wonder about what kinds of people do what kinds of things on the Internet), to try to answer in the last part of class.

Game Plan:
Pt. 1 – Discussion of results of sound lab experiment
Pt. 2 – Presentation and discussion of digital divide
Pt. 3 – Eszter Hargittai on the "skill divide"
Pt. 4 – Play with data on digital inequality
Pt. 5 – Set up team assignment on cyber-communities

Week 8 – Internet and Community (Nov. 12)

Assignments:
1. Write up brief report on your cyber community. How many web sites did you find? What kind? What are the patterns of interlinkages? Is there a single community or a set of subcommunities? How commercial are the sites?   How up to date are the linkages? If you enter the list-serve do you get responses? Are there interactive spaces? What sites are easiest to find on search engines? Studies of special interest communities (with each student or group taking a separate community) – how many web sites, what kind of web sites, how up to date are links, if you enter the list-serve do you get responses, etc.
2. *Readings:*

Review Cass Sunstein, "The Daily Me" (from week 2).

Read Barry Wellman, Jeffrey Boase, and Wenhong Chen. 2002. "The Networked Nature of Community: Online and Offline." *Information Technology and Society* 1: 151-65. Access on-line from:

http://www.chass.utoronto.ca/~wellman/publications/publications.html

Review Lessig, *Code*, ch. 6 ("Cyberspace"), pp. 63-84.

Game plan:

1. Report results of team projects.

2. Introduction to technologies for building communities – e-mail, list serves, chat rooms, Amazon-type feedback systems, Web circles, other commercially induced communities

3. Discussion of Wellman and presentation of other research on whether Internet is building or corroding community, trust, and social capital.

4. Set up filter trials for next week.

Week 9 – The Dark Side of the Internet (& Defending Children Against It) (Nov. 19)

Assignments.

1. Write brief report on filter trial results.

2. *Readings:*

Pro: Jack Balkin et al. *Filtering the Internet: A Best Practices Model*

http://islandia.law.yale.edu/isp/filtering/papers.html

Con: Marjorie Heins, *Internet Filters: A Public Policy Report.*

http://www.ncac.org/issues/internetfilters.html

3. Based on your filter trial and the readings, write down an important public policy issue and a values issue that is related to it. Be prepared to present this (very briefly) in class.

Game plan

Part 1. Brief presentation on technical issue in filtering.

Part 2. Student presentation of reports of filter trials, and values/public policy issues.

Part 3. Break into teams to develop policy proposals.

Part 4. Present policy proposals to Professor Stanley N. Katz of Woodrow Wilson School. Professor Katz will react and lead discussion.

Week 10 – Privacy and Encryption (Nov. 26)

Assignments:

1. Readings:

The President's Critical Infrastructure Protection Board. Sept. 18, 2002. *The National Strategy to Secure Cyberspace.* Draft for commentary. On seminar web site, or link through http://www.whitehouse.gov/pcipb/

Lessig, *Code*, ch. 11 ("Privacy"), pp. 142-63.

2. Write a very brief memo (1 page max) describing values/policy issues raised by the readings, and be prepared to present ideas in class.

Game plan.

Part 1: Presentation on technical issues in encryption.

Part 2: Visit with Professor Ed Felton of Computer Science Department, who will lead discussion on the capacity of governments to spy on their citizens.

Week 11: The Internet, Politics, and Government (Dec. 3)
Assignments:
1. Readings: Bruce Bimber. 2001. "Information Technology and the New Politics: Brief Remarks on Political Change."
http://www.polsci.ucsb.edu/faculty/bimber/research/infotech&newpolitics.html
        Jane E. Fountain. 2001. "Paradoxes of Public Sector Customer Service."
Governance: An International Journal of Policy and Administration 14: 55-73. This paper is available at the Princeton University Library website, through the digital journal collection (under *Governance*).
        California Secretary of State Task Force on Internet Voting. 2000. Final Report and Technical Appendix A. http://www.ss.ca.gov/executive/ivote/appendix_a.htm and http://www.ss.ca.gov/executive/ivote/appendix_a.htm
2. Visit http://www.voteswap.com/ to see how people swapped votes to make their own votes count for more in 2000.
3. Write a 3-page memo on (a) desirable qualities for a democratic polity and (b) how the Internet might enhance or degrade these qualities (or both).
Game plan
Part 1. Student Presentation and discussion of memos.
Part 2. Presentation on how people are using the Internet to organize social movements; inform and persuade voters; and take part in elections.

Week 12: Recap (Dec. 10)
1. *Readings*. Marjorie Blumenthal and David Clark, "Rethinking the Design of the Internet." http://www.ana.lcs.mit.edu/anaweb/PDF/Rethinking_2001.pdf
        Chapter 6: "Conclusions and Recommendation," Pp. 199-240 in National Research Council, *The Digital Dilemma: Intellectual Property in the Information Age*. Washington, D.C.: National Academy Press, 2000.
http://www.nap.edu/html/digital_dilemma/ch6.html
Our modest goal for this week is to take stock of the semester and to design a national Internet policy.

■   In lieu of exam, we will meet in January over pizza for project presentations.