GOVERNANCE OF THE E-CONOMY

Political Science 138D
Fall 2002
Wednesdays and Fridays, 4:00 – 5:30 pm
100 Lewis
Wednesdays 6:00 – 7:30 pm
100 Moffitt

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Is a new digital economy—an E-conomy— emerging in the advanced industrial countries? Does the digital economy pose new and distinctive governance problems and policy issues? Is the explosion of information networks, and the Internet in particular, changing the political economy of the advanced countries? Are these developments transforming the character of the international economy? How can we explain the emergence of these economic changes and which analytical tools can we use to understand their importance? This course will address these questions from the perspective of comparative political economy.

The course will explore the literature on the political economy of the Internet to determine what policy choices—and hence which political debates—are and will be most important. In part, the course is intended to review and evaluate the quality of our knowledge about concepts like "the information society" and "the knowledge economy." We also will examine the impact of the burgeoning digital economy on the political economy of the advanced countries. We will inquire into what we really know about the digital economy, how do we know it, and what important questions remain unanswered.

The course will ask:

- What is the nature and scope of the digital economy?

- What are the most important governance and policy issues for the US, including infrastructure, competition, international rulemaking, and intellectual property policies?
- What insights might analyses of previous periods of technological upheaval offer into political economic repercussions of the Internet and the rise of the digital economy?
- How do information policies differ among nations, how do they compete, and how are differences resolved?
- Are these changes so fundamental that our basic concepts and methods of policy, politics, planning, and theory have to change?

SCHEDULING, ASSIGNMENTS AND GRADING:

Wednesdays: 4:00 pm – 5:30 pm,
6:00 – 7:30 pm with Guest Speakers

Fridays: 4:00 pm – 5:30 pm (when scheduled)

Sections: **[LET'S VERIFY SECTION TIMES]**

Tuesday	1 – 2 pm	Section 103	72288
Tuesday	2 – 3 pm	Section 104	72291
Wednesday	82 – 3 pm	Section 105	72297
Wednesday	1 – 2 pm	Section 108	72307
Thursday	11 – 12 pm	Section 110	72309

We will be inviting many guest speakers this semester, to be speaking from 6:00 – 7:30 pm on Wednesday evenings **in place of classes on Friday**, unless otherwise scheduled. Our Guest Speakers are among the leading experts in academia, government, and business who are directly involved in many of the economic and policy issues we will cover in this course. They have generously agreed to take time out from their busy schedules and we are fortunate to be able to benefit from their experience and insight. The speakers will be announced when their schedules are confirmed.

Students will be graded according to four criteria:

(1)	Midterm Exam	25%
(2)	Research Paper	35%
(3)	Final	30%
(4)	Class Participation	10%

(1) All students must take a closed-book, in-class **mid-term exam**. The exam will comprise **25%** of the final grade for this course.

(2) All students must write a substantial **research paper** of 15 to 20 pages. Individual topics must be approved in advance by the instructors. The project should demonstrate knowledge of the theoretical materials assigned and the ability to use them to explore an empirical area of the digital economy and associated policy issues. As indicated on the

syllabus, students should submit draft paper topic ideas in section during Week VI to enable the instructors to help formulate a workable topic by Week VIII. Students **must** have an approved paper topic by Week VIII. The paper will comprise **35%** of the final grade for the course.

(3) All students must take the **final exam**. The exam will be closed-book and held in-class at the time and place set forth in the schedule of classes. The final exam will comprise **30%** of the final grade.

(4) **Class participation** counts. The class as a whole will suffer if students fail to do the reading and do not participate in class and section discussions. Therefore, class participation in both lecture and section will constitute **10%** of the final grade. Twice during the semester, GSIs will organize debates within section on a current policy topic covered in the course. All students **must** submit **within a week** of these debates a short (one page or less, bullet points suffice) summary of the critical arguments in favor and against a certain policy, and sketch out their own position. We intend to be constructive, not coercive; class participation will only count towards raising a student's grade.

MATERIALS:

- The required book for this class is Lessig, Lawrence, *Code and other Laws of Cyberspace* (New York: Basic Books, 1999). This book will be available for purchase at the ASUC textbook store.
- The reader for the class will include all other assigned and recommended readings, unless otherwise indicated, and will be available for sale at Copy World, 2154 University Avenue, Berkeley 94704, (510) 849-9710.

PART I: WELCOME TO THE REVOLUTION?

PERSPECTIVES ON ECONOMICS, TECHNOLOGY, AND POLITICS

The first two class meetings will feature an overview of the course as a whole and a glimpse of the research project that lies behind it. Administrative and organizational details will be addressed. The readings will provide an introduction to the political and economic context for the course.

WEEK I

ORIGINS: A BRIEF HISTORY OF THE INTERNET

What do we mean by an information economy, E-commerce, or the Internet economy? What, if anything, is new and unique about these phenomena? The readings introduce some of the ways that contemporary scholars are answering the key questions: Do the changes brought about by information technologies require distinctly new concepts and methods of analysis and measurement? Do they raise new kinds of economic or political questions requiring new policy and political processes?

- READINGS: Cohen, Stephen, J. Bradford DeLong, Steven Weber, and John Zysman, "Tools: The Drivers of E-Commerce," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Berners-Lee, Timothy, *Weaving the Web* (New York: HarperCollins, 2000) ch. 2-4.
- Kelly, Kevin, *New Rules for the New Economy* (New York: Viking, 1998), pp. 1-22, 65-82, 108-117, 156-161.
- Lessig, *The future of ideas* (New York: Random House, 2001), pp. 26 -46

RECOMMENDED:

- Salus, Peter, *Casting the Net* (Reading: Addison-Wesley, 1995), chs. 1-6.
- Varian, Hal and Jeffrey MacKie-Mason, "Economic FAQs About the Internet," from McKnight and Bailey, eds., *Internet Economics* (Cambridge: MIT Press, 1997).
- Hobbes' Internet Timeline http://info.isoc.org/guest/zakon/Internet/History/HIT.html

WEEK II

ARCHITECTURES: CODE AS LAW AND THE LAW OF THE CODE

The design—or architecture—of the Internet and the telecommunications system become increasingly important as they occupy an increasingly central place in social and economic life. How should a network and a communications system be structured? How might different architectures embody or favor different value choices? How does legal theory conceive of property and how do these conceptions play out in an economy

based on networked organizations and information? Each of these profound and deeply theoretical questions bear directly on the policies we will be considering in the remainder of the course. Under conditions of upheaval and uncertainty, theories provide essential guidance and orientation in how to grapple with and shape an emerging political, economic, and social order. In short, one cannot avoid theoretical inquiry.

READINGS:

- Lessig, Lawrence, *Code and Other Laws of Cyberspace* (New York: Basic Books, 2000), Preface, and chs. 1-3.
- Brand, Stewart, *How Buildings Learn: What Happens After They're Built*, excerpts.
- Isenberg, David, "Rise of the Stupid Network" (also available at http://www.hyperorg.com/misc/stupidnet.html).
- Barlow, John Parry, 'The Economy of Ideas' in *Wired 2.03*.

QUESTIONS:

- What are the relationships between legal architectures and physical and/or virtual architectures?
- Which is more important in the digital economy?
- How does technological architecture, or "code" regulate?
- Are legal codes less effective in regulating behavior in a digital environment?
- What is the "code" governing the development and use of open-source software?

WEEK III

TRANSFORMATIONS: DOES TECHNOLOGY DRIVE SOCIAL CHANGE?

The next two weeks deal with historical and institutional explanations of political economic development and that of the digital economy in particular. What are the different theoretical perspectives we use to analyze the digital economy? How do these explanations differ? What are their political, economic, and social implications? What are the relations between the state and law, on the one hand, and economic and technological development, on the other? What evidence supports each of these explanations? Do they support the view that the digital economy is a revolutionary development on par with the creation of capitalist markets or the invention of moveable type? Do they contradict such sweeping characterizations?

READINGS:

- Heilbroner, Robert L. and William Milberg, *The Making of Economic Society, 10th Edition* (Saddle River, NJ: Prentice Hall, 1998), Ch.3, 4, 5, 11.
- Fogel, Robert W., *Railroads and American Economic Growth: Essays in Econometric History* (Baltimore: Johns Hopkins Press, 1964) ch.1, and pp.134-137.
- David, Paul, 'The Computer and the Dynamo: The Modern Productivity Paradox in a Not-Too-Distant Mirror", Center for Economic Policy Research, Stanford, CA (1989).
- Lessig, Lawrence, *The Future of Ideas*, pp. 49-99.

- Borrus, Michael and John Zysman, "Globalization with Borders: The Rise of Wintelism as the Future of Industrial Competition," *Industry and Innovation*, vol. 4, no. 2 (Dec. 1997).

RECOMMENDED ADVANCED READING:

- Polanyi, Karl, *The Great Transformation* (Boston: Beacon Press, 1944), Ch. 3 "Habitation versus Improvement," pp. 33-42, Ch. 4 "Societies and Economic Systems," pp. 43-55, Ch. 5 "Evolution of the Market Pattern," pp. 56-67, Ch. 6 "The Self-Regulating Market," pp. 68-76.
- North, Douglass C., *Institutions, Institutional Change, and Economic Performance* (Cambridge; New York: Cambridge University Press, 1990), Ch. 1, 9-11.

QUESTIONS:

- What defines a "great transformation" of the political economy?
- What are the preconditions of a great transformation?
- Which is more determinative of behavior: social norms or technology?
- How do markets form? What effect do they have on technology? On other institutions?
- How do institutions, norms, and technology interact in the process of economic change?
- What is the process of internationalization of production described in Borrus and Zysman? Does this process represent a "great transformation" or a change of a lesser order of magnitude?
- How do network technologies facilitate this process of internationalization? What are the political and economic ramifications of this internationalization?

WEEK IV

IT AND THE INTERNET: CRITICAL JUNCTURE OR THE SAME TRACK AT HIGHER SPEED?

How do institutions shape the course of economic development and the adoption and use of technologies? How might we apply the lessons of institutional analysis to the emerging phenomenon of the digital economy? How does economic theory address the technological upheaval we are experiencing and its economic consequences? In what ways do information technology and the digital economy challenge existing institutional and legal structures?

READINGS:

- Schumpeter, Joseph A., *Capitalism, Socialism, and Democracy, 3rd Edition* (New York: Harper Torch Books, 1950), Chaps. 7, 9, 11, and 12.
- Zysman, John, "How Institutions Create Historically Rooted Trajectories of Growth," *Industrial Corporate Change*, Vol. 3: 1, 1994.
- Turner, Adair, *Just Capital* (London: Macmillan, 2001), ch. 2, 'The New Economy: High Tech or High Touch?', ch. 5, "Which Capitalism is Best?".
- DeLong Brad and Michael Froomkin, 'Speculative Microeconomics for Tomorrow's Economy'.

QUESTIONS:

- Is the present transformation of the same depth and magnitude as those covered in Heilbroner & Milberg and Polanyi?
- What is Schumpeter's idea of "creative destruction"? How does it apply to present day technological and economic development?
- What disturbs Schumpeter about the course of capitalist development? What features of present day capitalism support or refute his vision of the dynamism and deficiencies of modern capitalism?
- Are current technological and economic changes a break with the past? Do they reflect continuity with past forms of economic organization and development?
- How do institutions influence economic activity and the development, appropriation, and diffusion of new technologies? Can we analyze economic development and technological innovation in terms divorced from specific institutional contexts?

WEEK V

GETTING DOWN TO BUSINESS—
A SECTORAL VIEW OF THE IMPACT OF DIGITAL NETWORKS

This week's readings are case studies of the impact of digital communications technologies on different industrial sectors. These studies provide you with some concrete evidence of what is happening in the "real world." There is little careful, detailed, and systematic empirical research on the digital economy and this is some of the best available. You should review the empirical information contained in these readings throughout the course. It will provide some useful grounding and evidence for the policy arguments we will confront throughout the semester.

READINGS:

- Shapiro, Carl and Hal R. Varian, *Information Rules: A Strategic Guide to the Network Economy* (Boston: Harvard Business School Press, 1999), Ch. 1, "The Information Economy".
- Kenney, Martin and James Curry, "We Want to Be Like Mike: The Internet and the Personal Computer Value Chain," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Helper, Susan and John Paul MacDuffie, "E-volving the Auto Industry: E-Business Effects on Consumer and Supplier Relationships," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Nagarajan, Anuradha, Enrique Canessa, Will Mitchell, and C.C. White III, "E-Commerce and Competitive Change in the Trucking Industry," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Selection of articles on file trading from *The Economist* and Michael Greene's speech to the 2002 Grammys.

- Review Cohen, et al., from Week I.

RECOMMENDED:

- Bailey, Joseph P., "The Retail Sector and the Internet Economy," prepared for presentation at *The E-Business Transformation: Sector Developments and Policy Implications* (BRIE, et al.: Washington DC, September 26-27, 2000).
- McAfee, Andrew, "Economic Impact of the Internet Revolution: Manufacturing," prepared for presentation at *The E-Business Transformation: Sector Developments and Policy Implications* (BRIE, et al.: Washington DC, September 26-27, 2000).
- Hammond, Jan and Kristin Kohler, "E-Commerce in the Textile and Apparel Industries," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Potter, Jonathan, "Confronting the Digital Era: Thoughts on the Music Sector," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).

QUESTIONS:

- What are the effects of digital networks in the sectors described in the readings?
- Are there any common trends or themes across the sectors? Are there any striking differences?
- Have network technologies changed the structure of corporate firms? Their relationships with one another? With their employees and/or customers?
- Have there been significant productivity gains from the adoption of network technologies? If so, how?
- Have network technologies changed markets themselves? Do they exist where they didn't exist before? If so, why have these developments occurred?

PART II

POLICY AND THE MARKET IN THE INTERNET AGE

The second part of this course will focus on a succession of specific, though often overlapping and interrelated policy areas and their relation to the structure, operation, and development of the digital economy. We will explore these areas with respect to three fundamental lines of inquiry:

(1) What are the current policies and institutional context in different countries?

(2) How do these conditions affect the structure and competitive dynamics of markets and the strategies and behaviors of political and economic actors?

(3) What are the alternative policies and policy mechanisms available to state officials and private actors in governing technological, economic, legal, and political relations in these policy areas? What *should* these policies be?

WEEK VI

INFORMATION & INFRASTRUCTURE POLICY

This week begins the section of the class dealing with specific policy issues raised by information technologies and the digital economy. We begin with an examination of the state's role in the regulation and provision of the essential infrastructure of network communications. The Internet revolution was, in no small part, the unintended consequence of telecommunications liberalization in the United States. Today, the ownership, control, and architecture of data transmission networks are rapidly becoming crucial issues in the development and future of the digital economy. What are the core issues in the construction of digital communications infrastructure? Which policy options are open to the state? What are the political economic preconditions and likely consequences of different policy choices?

READINGS:

- Vogel, Steven, *Freer Markets, More Rules* (Ithaca: Cornell University, 1996), pp.9-24, 217-230.
- Lessig, Lawrence, *Code and Other Laws of Cyberspace*, Chaps. 6-8 and Appendix.
- Waesche, Niko, *Internet Entrepreneurship in Europe: Venture Failure and the Timing of Telecommunications Reform* (Northampton: Edward Elgar, forthcoming), chs. 2 and 3.
- "Rural America Takes to Makeshift Broadband," *Fox News*, 16 August 2002.
- "France Announces Internet Plan," *AP News*, 7 July 2001.
- Toqueville, Alexis de, *Democracy in America* (New York: Harper Perennial, 1988), pp. 66-70.
- Bar, François, Stephen Cohen, Peter Cowhey, Brad DeLong, Michael Kleeman, and John Zysman, "Access and Innovation Policy for the Third-Generation Internet," 24 *Telecommunications Policy* 489-518 (2000).
- Salus, Peter, Casting the Net ch. 8, 20.

RECOMMENDED:

- Temin, Peter, *The Fall of the Bell System* (Cambridge: Cambridge University Press, 1987), Introduction, pp. 1-8, chap. 8, pp. 336-366.

QUESTIONS:

- What is "reregulation" as opposed to "deregulation"? How do these concepts relate to the breakup of AT&T in the U.S.? What were some of the political, economic, and technological forces led to the breakup of AT&T?
- How have the breakup of AT&T and the reregulation of the U.S. telecommunications industry in the 1980s affected the development of global data communications in the 1990s?
- What are some differences between the European telecommunications experience and the American experience? How have these differences mattered for the development of domestic communications infrastructure and international competition?
- What would de Toqueville say about the rollout of broadband Internet service in rural areas in France and the U.S.? Would he come to the same conclusions about the two countries that he arrived at 150 years ago? What does that imply?
- What policy challenges are presented by the approaching deployment of broadband Internet access? What policies should be adopted to deal with them?

****Draft paper topic ideas due in Lecture 2****

WEEK VII:

THE DIGITAL FIRM: MARKETS, HIERARCHIES AND NETWORKS IN THE NEW ECONOMY

The explosive development and diffusion in digital network technologies has had a tremendous impact on business. However, the enduring features of this impact and the changes in firm structure and strategy it has wrought remain uncertain amid the flux and rapidly changing economic circumstances of recent years (remember the Great Dot.Com Bubble?). Markets and businesses alike are being transformed, and this week's readings build on those in Week III to analyze these changes and their underlying logic. In doing so, we deepen our understanding of the changes that are rocking the political economy today by looking at the "micro" level of economic actors, their interests, strategies, and adaptive responses to a vastly changed technological environment.

READINGS:

- Williamson, Oliver, *The Economic Institutions of Capitalism* (New York: The Free Press, 1985), ch.3.
- Alchian, Armen and Harold Demsetz, "Production, Information Costs and Economic Organization", *American Economic Review 1972.*

- Bar, François, "The Construction of Marketplace Architecture," in the BRIE-IGCC E-conomy Project ed., *Tracking a Transformation: E-Commerce and the Terms of Competition in Industries* (Washington, D.C.: Brookings Institution, 2001).
- Weber, Steven, *The Success of Open Source* (Cambridge: Harvard University Press, 2002), ch.5 and 6.

QUESTIONS:

- How has the Internet affected traditional forms of firm organization and strategy? Do these effects depend on the sector of the economy in which the firm is (primarily) located?
- What overarching principles can one identify that might explain the effects of information technology on business organization and strategy?
- What types of new business models have been developed in response to digital communications technologies? (On this, review also the readings on business experimentation in week V.)
- Have the new digital communications technologies, including the Internet, driven a de-concentration and de-centralization of the economy? Have they effected a re-concentration and re-centralization?
- For both the foregoing questions, consider how and why the trends and outcomes you have identified have emerged?

WEEK VIII

INTELLECTUAL PROPERTY OR, WHO OWNS WHAT IN CYBERSPACE?

Who owns what on the Internet? What is the scope of ownership rights in information and what are the implications of broadening intellectual property rights? Who are the winners and losers under different property rules? What are the most important conflicts over the definition of intellectual property rights? Are traditional legal principles adequate to address the issues created by the development of digital technologies and network economies?

READINGS:

- Vaidhyanathan, Siva, *Copyrights and Copywrongs* (New York: New York University Press, 2001), pp. 1-34, 159-184.
- Lessig, Lawrence, *Code and Other Laws of Cyberspace*, Chaps. 9-10.
- Boyle, James, "The Second Enclosure Movement and the Construction of the Public Domain," available at http://james-boyle.com.
- Kemp, Brodi, BRIE-GMF Briefing Report on Intellectual Property: 'Copyright's Digital Reformulation,' September 2001.
- Lessig, Lawrence, *The Future of Ideas*, Part Two.

ON THE WEB:

- Tyson, Laura D'Andrea and Edward F. Sherry "Statutory Protection for Databases:

Economic and Public Policy Issues," also available at http://www.infoindustry.org/ppgrc/doclib/grdoc016.htm
- Samuelson, Pamela, "Letter re: Tyson/Sherry Report," also available at http://www.arl.org/info/frn/copy/psamlet.html

QUESTIONS:

- How has the advent of digital communications technologies disturbed the pre-existing structure of intellectual property law?
- What are the specific policy problems created in the intellectual property area by digital technologies?
- Do these technologies and new forms of commerce increase or diminish the importance of intellectual property?
- Should intellectual property rights be expanded or narrowed (or left unchanged) under current circumstances of technological and economic change?
- Should intellectual property rights be enforced more or less stringently, or are there other modes of enforcement that would be preferable to lawsuits and prosecution?
- What is the relationship between intellectual property and monopoly? Has this relationship changed with the emergence and mass spread of digital networks?

****Final paper topics due for instructor approval (Lecture 1)****

****MID-TERM EXAM (Lecture 2)****

WEEK IX

THE NETWORK ECONOMY AND COMPETITION POLICY

How far does competition in the computer, Internet, and (potentially) the E-commerce markets resemble the theories and historical experiences examined earlier in the course? What is the impact of digital technology on market structure and industrial organization? As the case of Microsoft shows, the intersection of intellectual property and network industries and markets threatens to create extraordinarily powerful monopoly effects. There is a possibility that this problem is endemic to the digital economy. We must therefore briefly venture into the fields of competition policy and antitrust law to understand the policy options and responses to this threat. Can traditional regulatory approaches adequately address competition problems generated under contemporary technological and economic conditions? A second problem area is emerging in the telecommunications industry—the owners of "pipe" through which digital information flows to consumers. The increasing concentration and potential closure of transmission networks creates another class of competition issues that are only now becoming apparent. How should we deal with them? What policy mechanisms are at our disposal?

READINGS:

- Lemley, Mark and David McGowan, "Legal Implications of Network Economic Effects," 86 Calif. L. Rev. 479 (1998) (Introduction and Antitrust sections only).
- Gilbert, Richard J., Networks, Standards, and the Use of Market Dominance: Microsoft (1995)," Case 17 in John E. Kwoka, Jr. and Lawrence J. White, *The Antitrust Revolution: Economics, Competition, and Policy, 3d Edition* (New York and Oxford: Oxford University Press, 1999).
- Bork, Robert H., "The Case Against Microsoft," ProComp: Project to Promote Competition & Innovation in the Digital Age (1999) (also available at http://www.procompetition.org/research/bork.html/).
- Besen, Stanley M., *et al.*, "Vertical and Horizontal Ownership in Cable TV: Time-Warner (1996), Case 19 in John E. Kwoka, Jr. and Lawrence J. White, *The Antitrust Revolution: Economics, Competition, and Policy, 3d Edition* (New York and Oxford: Oxford University Press, 1999).
- Cioffi, John, 'The Collapse of the European Union Directive on Corporate Takeovers: The EU, National Politics and the Limits of Integration', BRIE Briefing Paper 2001.

RECOMMENDED:

- *U.S. v. Microsoft* – Index of Coverage from the NY Times, http://www.nytimes.com/library/tech/reference/index-microsoft.html/
- "Competition in the Network Market: The Microsoft Challenge," prepared by the Software Publishers of American, available at ProComp: Project to Promote Competition & Innovation in the Digital Age web site, http://www.procompetition.org/research/server/index.html/

You can also look through the judicial decisions in the Microsoft antitrust case (be forewarned, it is not easy going for the uninitiated):

- *U.S. v. Microsoft*, Preliminary Findings of Fact (D.D.C. 1999) (District Court ruling), available at the ProComp web site, http://usvms.gpo.gov/findfact.pdf/
- *U.S. v. Microsoft*, 147 F.3d 935 (D.C. Cir. 1998), available at http://laws.findlaw.com/DC/975343A.html/

QUESTIONS:

- What competition and antitrust issues do digital communications technologies generate? Are these problems new in type or magnitude? Are they inherent and unavoidable in markets and industries based upon these technologies?
- Consider again the questions from last week: What is the relationship between intellectual property rights as currently defined and enforced and monopoly?
- Are there trade-offs between the economic benefits of a common technical standard and threats to competition? Are there other technical or legal means of addressing the common standard problem that eliminates, or at least reduces, competition problems?
- What policy responses are appropriate to deal with competition problems in a networked economy? Are there alternatives to traditional antitrust enforcement?
- What are the competition and antitrust problems raised by Microsoft's behavior? In other words, what, in particular, did the U.S. Department of Justice attack in its lawsuit against the company?

WEEK X

PRIVACY, SURVEILLANCE, AND FREE SPEECH

This week provides an example of the high stakes involved in the development of the digital economy. The rise of the Internet is commonly described as one of the greatest boons to communication and free speech in human history. Yet surveillance is also a form of communication. Does the prevailing discussion of the Internet reveal an adequate awareness of these risks? Does the new information technology and the economic structures to which it gives rise liberate or oppress? What are the risks of ubiquitous surveillance in networked society? What threats to privacy interests in personal data are posed by the emergence of the digital economy and information technologies? What dangers might result from the erosion of privacy? What regulatory and other legal means can be adopted to protect privacy interests? What arguments can be advanced in favor of increasing privacy protection? Do these justifications conflict with the trend in the U.S. towards expanding the scope of intellectual property and contract rights?

READINGS:

- Lemmey, Tara, "Your Next Identity Crisis," Business2.0 (Sept. 26, 2000).
- Kang, Jerry, "Information Privacy in Cyberspace Transactions," 50 Stan. L. Rev. (1998), pp.1193-1202, 1220-1246.
- Lessig, Lawrence, *Code and Other Laws of Cyberspace*, Chaps. 11-13.
- Schauer, Frederick, "Internet Privacy and the Public-Private Distinction," 38 Jurimetrics pp. 555-564 (Summer 1998).
- Sprenger, Polly, 'Sun on Privacy: Get Over It', *Wired January 1999*.
- Newman, Abe, BRIE-GMF Briefing Report on Privacy, 2001.

RECOMMENDED:

- Berman, Jerry and Deidre Mulligan, "Privacy in the Digital Age: Work in Progress," 23 Nova Law Review (Winter 1999).

QUESTIONS:

- Did George Orwell get it right in 1984? To wit: is advancing technology an oppressive force through its erosion of privacy and its capacity to increase surveillance?
- How and how much does digital network technology threaten privacy?
- Does the degree of threat depend on the legal environment in which the technology is used? Does it depend on who controls or owns the networks?
- Does property rights in information drive the erosion of privacy in a digital environment or might it help to preserve it?
- Does digital technology increase the demand for greater rights to free speech?
- Are these demands for greater protection of free speech (and on line association) a form of cultural imperialism imposed on non-Western nations?

- Should societies be able to "protect" themselves from against some forms of speech? If not, why? If so, which forms of speech?

WEEK XI

ONE OR SEVERAL E-CONOMIES?

This week examines whether and how business experimentation and policy adaptation in the E-conomy might vary across states. The readings in Week III and IV showed that markets are embedded in institutions, and that these institutions shape both the development of new technologies and the impact new technologies have. Are digital technologies driving a convergence toward a single set of most efficient business practices and national rule-systems? Or are we witnessing the rise of several distinct E-conomies as experimentation and adaptation progress along institutionally determined trajectories? How do institutional differences across political economies provide firms within the same sector with different incentives and constraints? What are the critical institutions? How do governments leverage their institutional capacities to make policy in the E-conomy, and how do institutions limit how governments can meet their objectives?

READINGS:

- Bar, François and Michael Borrus with Benjamin Coriat, "Information Network and Competitive Advantages: The Issues for Government Policy and Corporate Strategy," *Final Report on the Seminar 'Information Networks and Business Strategies'* (Paris: OECD-BRIE, 1989), excerpts, pp. 26-35.
- Helper, Susan and John Paul MacDuffie, "Suppliers and Intermediaries," in Bruce Kogut ed., *The Global Internet Economy* (Cambridge: The MIT Press, forthcoming 2003).
- Glimstedt, Henrik and Udo Zander, "Sweden's Wireless Wonders: The Diverse Roots and Selective Adaptations of the Swedish Internet Economy," in Bruce Kogut ed., *The Global Internet Economy* (Cambridge: The MIT Press, forthcoming 2003).
- Sallet, Jonathan – Comparative Broadband Regulation, BRIE Memo, 2002.
- Bach, David and Abe Newman, "Self-Regulatory Trajectories in the Shadow of Public Power: Resolving Digital Dilemmas in Europe and the United States"

Recommended:

- Zaheer, Srilata and Radhika Rajan, "Creativity under Constraint: Technological Imprinting and the Migration of Indian Business to the New Economy," in Kogut ed.
- Chang, Sea Jin, "The Internet Economy of Korea," in Kogut ed.

QUESTIONS:

- Is one global digital economy emerging or are multiple, nationally or regionally based digital economies forming within an increasingly global context?
- What drives the trends towards convergence and divergence in the development of the digital economy cross-nationally? In other words, what influences the ways in which

technologies and technologically enabled political and economic processes are adopted in different countries?

- How have U.S. and Japanese firms employed digital technologies to manager their supply chains? Is there a difference between cross-national experimentation with EDI networks and more recent Internet-based communication technologies?
- Could the dot-com revolution have begun in Sweden and the wireless wave originated in Silicon Valley? Why or why not?
- How do digital technologies compel states to upgrade their regulatory toolkits?
- What might a "comparative institutional advantage" in the E-conomy look like?

PART III

TRANSFORMATIONS AT THE MACRO-LEVEL

WEEK XII

SOVEREIGNTY AND THE NATION STATE IN A NETWORKED WORLD

To return to the questions with which the course began—do the basic concepts, values and political institutions that have shaped American information policy in the past still work, or does information technology imply (and require) a new kind of politics as well? The vast increase in cross-national communications and the possibility of substantial anonymity pose great challenges for the traditional state in terms of collecting revenue and exercising basic social control. These challenges and potential threats to state power will have an impact at both the domestic and international levels. We must consider how the new communications technologies and networks affect state power and how the nation state, as traditionally structured, can address the problems created by a truly global communications medium.

READINGS:

- Lessig, Lawrence, *Code and Other Laws of Cyberspace*, Chap. 14.
- Johnson, David R. and David G. Post "Law and Borders – The Rise of Law in Cyberspace" also available at http://cli.org/X0025_LBFIN.html
- Cairncross, Frances, *The Death of Distance* (Cambridge: Harvard Business School, 2001)
- Strange, Susan, *The Retreat of the State* (Cambridge: Cambridge University Press, 1996), ch.1.
- Herz, John, 'The Security Dilemma in the Atomic Age"
- Helleiner, Eric, *States and the Reemergence of Global Finance* (Ithaca: Cornell University Press, 1994), Introduction.
- O'Brien, Richard. *Global Financial Integration: The End of Geography* (New York: Council on Foreign Relations Press, 1992), ch. 2, 3.

RECOMMENDED:

- Post, David G., "Anarchy, State, and the Internet: An Essay on Law-Making in Cyberspace," 1995 J. Online L. art. 3.

QUESTIONS:

- How does the advent of digital communications technologies and networks affect the capacities of states to fulfill their traditional functions of collecting revenue and maintaining basic social control (i.e., enforcement of criminal law)?
- Can the nation state perpetuate itself in this new digital and globalizing environment?
- Need the state fundamentally reform itself to adapt to this new environment?
- What are the proper rules for states to assert jurisdiction over online conduct?
- What are the most important threats to law enforcement posed by the Net?

- What rules and/or institutions would facilitate law enforcement in response to global communications networks?

WEEK XIII

GROWTH AND DEVELOPMENT IN THE DIGITAL ERA

The emergence of the digital economy has and will continue to have a substantial impact on social and economic life. Two dimensions of this impact are the distribution of communications resources throughout societies, i.e., access to networks, and the growing relative demand for skills in the workforce. Both point to the increasingly acute issue of growing socio-economic inequality. Here we explore the relationship between diffusing digital technologies and digitally enabled economic processes and inequality.

READINGS:

- Pritchett, Lant, 'Divergence, Big Time', *Journal of Economic Perspectives*, 1996.
- "Falling Through The Net: Defining the Digital Divide," U.S. Dept. of Commerce, National Telecommunications and Information Administration, revised version (Nov. 1999), also available with additional materials at the National Technology and Information Administration web site http://www.ntia.doc.gov/ntiahome/fttn99
- Mansell, Robin, 'Digital Opportunites and the Missing Link for Developing Countries', *Oxford Review of Economic Policy,* 2001.
- Boyer, Robert, 'The Diversity of Institutions Governing the New Economy', Paris, 2002.

RECOMMENDED:

- Castells, Manuel, *The Rise of the Network Society* (Oxford: Blackwell Pubs., 1997), ch. 4, "The Transformation of Work and Employment," pp. 251-279.

QUESTIONS:

- What constitutes access from the perspectives of social equity and economic development?
- How has the development of networks destabilized previous socio-political bargains over the distribution of communications capabilities, services, and information?
- What are the defining characteristics of the emerging "Digital Divide" between those who are connected to the burgeoning network society and those left outside it?
- What are the social, economic, and political implications of this divide if present trends continue?
- What can, or should, government do to ensure or improve equity in the digital economy?

WEEK XIV

GOVERNING THE GLOBAL ECONOMY

Even a decentralized and open-ended network like the Web must be organized around common organizing rules and principles. Yet, reaching agreement on these "coordination rules" is difficult in such a decentralized, centerless environment. How can this contradiction be resolved? ICANN is an institution developed to perform this function, but it remains highly controversial.

A second set of critical questions emerges from the continued political economic differences among countries. An important way to analyze the position of the state in the evolution of the digital economy is through comparison of economic and policy development in different countries and regions. Further, we cannot assume that the digital economy is one unitary or homogenous phenomenon. Questions of cross-national convergence and divergence in economic structures, institutions, and policies are among the most important outstanding questions concerning the digital economy.

READINGS:

- Lessig, Lawrence, *Code and Other Laws of Cyberspace*, Chaps. 15-17.
- Mueller, Milton, "Technology and institutional innovation: Internet domain names," *International Journal of Communications Law and Policy*, No. 5, pp. 1-32.
- Farrell, Henry, "Constructing the International Foundations of E-commerce: The EU-US Safe Harbor Arrangement, *International Organization*, forthcoming.
- Cowhey, Peter and John Richards, "Dialing for dollars: Institutional designs for the globalization of the market for basic telecommunications services," in Aseem Prakash and Jeffrey A. Hart eds., *Coping with Globalization* (New York: Routledge, 2000).
- Abbott, Frederick M., "TRIPS in Seattle: The Not- So-Surprising Failure and the Future of the TRIPS Agenda," 18 Berkeley Journal of International Law 165-179 (2000).

QUESTIONS:

- Is the Internet a global resource that requires global coordination? If so, are our current institutions up to the task?
- Is ICANN a successful experiment in direct global democracy or a shameless scheme to preserve U.S. dominance over the heart of the Internet?
- What differentiates different national political economies in an increasingly digital era? Market structures? The structure of public and private institutions? Differences in laws, regulations, and/or policies?
- Do the salient policy issues vary cross-nationally and, if so, why?
- How do these differences affect the construction of mechanisms for global governance?

WEEK XV -- CONCLUSION

IS THERE A NEW POLITICAL ECONOMY?

The readings in this last week look ahead and pick up some of the themes spelled out at the very beginning of the course. Is there something fundamentally different about this digital transformation that lets it stands out among all previous ones? Is the move from atoms to bits a watershed for economics, politics, and societies? How might we think

about these questions twenty years from now, when digital information technologies will have been around for a generation and the biotech revolution might have transformed the world once more? The digital revolution came as a surprise to many, and we are still trying to comprehend its long-run transformative effects. But can we draw general lessons, lessons independent of the technology itself, that help us prepare better for the next round of challenges? How do we plan in a world where we anticipate the next big thing to be just around the corner?

READINGS:

- Joy, Bill, "Does the Future Need Us?," *Wired* 8.04, April 2000.
- Weber, Steven, *The Success of Open Source*, Conclusion.
- Lynch, Clifford "The Battle to Define the Future of the Book in the Digital World", *First Monday* 6:6.
- Joint Venture, *Preparing for the Next Silicon Valley*, June 2002.

QUESTIONS:

- In the shadow of nuclear weapons, more than a few wondered whether the world would have been better off had the atom never been split. Could we ever feel this way about digital technologies?
- The industrial revolution continues to have an effect on the organization of social, economic and political life, even though few steam engines are still in service and smokestacks are disappearing in the "industrialized" world. How will this current digital transformation have impacted life once HTML-websites, text messaging, and Linux will be of ancient memory?
- How do political, economic, and social-habitual factors influence the development of a technology as seemingly simple and desirable as electronic books? What does this tell us about the trajectory of technological evolution more generally?
- Is the Valley ready for biotech? Are we?