Articles

From the Gutenberg Bible to Net Neutrality—How Technology Makes Law and Why English Majors Need to Understand It

Peter Linzer*

I. INTRODUCTION

A. Thinking Outside Legal Boxes in Private and Public Law: From Rough Justice to the Internet

I have, throughout my teaching career, balanced a moderately uncommon pair of specialties—contracts, the most private of law, and constitutional law, the most public.¹ When I was invited to speak in the Pacific McGeorge Distinguished Speakers Series, I was asked to give two talks: the first to the students about something old, a paper I gave at Wisconsin a few years ago called Rough Justice: A Theory of Restitution and Reliance, Contracts and Torts,² and the second to the faculty about something new. I decided that I wanted to speak

* Professor of Law, University of Houston Law Center. A.B., Cornell, 1960; J.D., Columbia Law School, 1963. May I thank the faculty of the University of the Pacific, McGeorge School of Law for tendering me the honor of being named to its Distinguished Speaker Series. Ruth Jones, Miriam Cherry, and Gerald Caplan were of especial help and support, but the entire faculty made the experience delightful. At my end, Rhea Stevens, Esq., a rare lawyer who really understands computers, gave me invaluable assistance with understanding the Internet, and Siddhartha Rao, University of Houston Law Center Class of 2008, my invaluable research assistant, was the person who first told me about the issues of net neutrality. I warmly thank the University of Houston Law Foundation and our entire law faculty’s friends, Dean Ray Nimmer and Associate Dean Richard Alderman, for financial support in my research.

¹. This sentence, while not incorrect, disguises the interactions between individuals and communities that make both topics so intriguing to me. Any contract, even the most personal, may involve the society, as in child surrogacy contracts. See, e.g., R.R. v. M.H., 689 N.E.2d 790 (Mass. 1998); In re Baby M, 537 A.2d 1227 (N.J. 1988). Much of constitutional law, on the other hand, involves individual rights, e.g., Roe v. Wade, 410 U.S. 113 (1973). On the interaction between contract and community, see Morris R. Cohen, The Basis of Contract, 46 HARV. L. REV. 553 (1933), and Jean Braucher, Contract Versus Contractarianism: The Regulatory Role of Contract Law, 47 WASH. & LEE L. REV. 697 (1990). On federalism (ostensibly a matter of governmental structure) as a protector of individual liberty, see Printz v. United States, 521 U.S. 898, 921 (1997) (“This separation of the two spheres is one of the Constitution’s structural protections of liberty.”). On the interaction of public and private rationales for the First Amendment, see THOMAS L. EMERSON, THE SYSTEM OF FREE EXPRESSION (1970); LAWRENCE H. TRIBE, AMERICAN CONSTITUTIONAL LAW 789 (2d ed. 1988); KATHLEEN M. SULLIVAN & GERALD GUNThER, CONSTITUTIONAL LAW 987-91 (15th ed. 2004). The most felicitous statement of the interaction is Justice Brandeis’s:

Those who won our independence believed that the final end of the State was to make men free to develop their faculties; and that in its government the deliberative forces should prevail over the arbitrary. They valued liberty both as an end and as a means. They believed liberty to be the secret of happiness and courage to be the secret of liberty.


to the faculty about how technology actually makes law by forcing change, whether voluntary or involuntary, open or covert. There seemed to be little connection between the two topics. *Rough Justice* was concerned with private dealings that fall between the legal cracks: not quite contract, not quite tort, not quite property, and maybe not even fitting into the guidelines for reliance and restitution liability. I looked at a fair number of cases in which the courts bent or twisted the rules to achieve a fair result—or refused to bend and said, “We’re sorry, but this doesn’t fit the formal rules, so the good guy loses.” I called on the courts to think less about how the case fit in traditional paradigms and to spend more time and energy on a search for justice—rough justice—in the particular case at hand.  

The effect of technology on law, particularly constitutional law, seems to have very little to do with *Rough Justice*. Yet I think that scientific change too forces the courts to abandon old paradigms\(^4\) and to think outside the formal and traditional legal boxes to which they have become accustomed—and not just in the area of intellectual property law.\(^5\) Inventions have created major areas of law, have forced changes in apparently unrelated areas of law, and have even “overruled” the Supreme Court, in fact if not in theory. After giving a tour of examples of technology driving legal change, from the printing press, through sub-orbital space flight, to the VCR and obscenity laws, I will look at a remarkable discussion of the interaction of technological change and the law, written 170 years ago by a now-discredited judge. Then, I will briefly apply my ideas to the current question of how we should deal with the technological changes that are swirling around us right now and the legal issues that they raise, specifically the multi-billion (if not trillion) dollar question of whether end-users and content providers or telephone, cable, and satellite companies should control

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However, Sections One through Four of the Restatement Third of Restitution are going to be rewritten and discussed anew when the nearly completed Restatement is prepared for final adoption by the American Law Institute, probably in about two years. Its justly acclaimed Reporter, Professor Andrew Kull of Boston University, is very receptive to criticism and to new ways of looking at old problems. I stand by my criticisms of the earlier draft, but I do not think that the Restatement is as subject to those criticisms today as it was five years ago. See Linzer, *supra* note 2, at 700 n.21.


5. Besides the cases that I discuss in this article, there are many examples from other fields. Two famous examples from contract law are *Kirke La Shelle Co. v. Paul Armstrong Co.*., 263 N.Y. 79 (1933) (discussing the effect of the development of talking pictures on a contract referring to “motion pictures”), and *Parev Products Co. v. I. Rokeach & Sons Inc.*., 124 F.2d 147 (1941) (Clark, J.) (discussing the effect of the invention of Crisco on a license to use a more viscous liquid vegetable fat product).
the Internet. In the end, this article is really the second half of a look at thinking outside legal boxes that began in *Rough Justice*.6

B. Internet Neutrality

The longer I worked on this article, and the more I read and learned about the Internet and Internet neutrality, the more central and more important they became. Many technological issues raise highly technical matters of administrative and communications law and antitrust, matters that many of us find ineffably boring. But the Internet has become an electronic public forum. Not only does it involve an enormous number of competing players, large and small, human, corporate and governmental, and not only does it involve so much money and power, most important, the freedoms of speech, press, and assembly are at stake. I will defer most of the discussion of the Internet to a separate article, but from the beginning, we need to realize that who controls the technology of the Internet may well control its substance.

Too many of us, though we use the Internet every day, have no idea how it really works. We all know that we can turn on our computer, press a couple of keys, and see something on a website located who knows where. What we don’t know is that to load that website requires an immense and complex series of electronic connections—telephone wires, cable, satellites, and a gigantic “backbone” or “pipe” of top-quality wire that operates as a digital superhighway. These various devices are put together by routers and other connectors programmed to deal with various contingencies—which type of material should get preference, whether some material can be “buffered,” that is, held up for a short period, and whether some material can be excluded from the system. These technical issues are invisible to the general public and ignored by most users of the Internet. Most of all, we don’t realize that the underlying hardware supporting the Internet—in effect its central nervous system—is owned by a group of telephone and cable companies, the Internet Service Providers (ISPs), whose interests may—or may not—conflict with the interests of computer users and content providers.

For a number of years, the transmission machinery was kept separate from content, but in recent years, especially because of changing technology and changing political and judicial attitudes towards mergers, ISPs like the reconstituted AT&T, Verizon, and AOL are becoming major content providers, and content providers like Time Warner are acquiring cable companies and

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6. I spent some time tinkering with calling this “Outside Legal Boxes II,” my *Rough Justice* lecture having been advertised to the McGeorge students as *Outside Legal Boxes I*. I would have justified this folly by pointing to the renumbering of the various Star Wars movies, the fact that Super Bowls I-III were neither called Super Bowls nor given numbers, and that the movie that began the Rambo series didn’t have Rambo in its title. Eventually, I gave this up as just leading to confusion, but I do want to repeat my thanks to Pacific McGeorge for having me speak and getting me interested in technology and legal change, which in turn alerted me to the serious free speech issues raised by control of the Internet.
becoming ISPs, raising the possibility that by combining the production of content with the means of delivering it, these giant companies will squeeze out unintegrated competitors. Vertical integration may lead to vertical monopoly or oligopoly, and this is almost certainly a bad thing for the public. To my mind, however, an even bigger danger is that if we allow big technology suppliers to limit the Internet to those who can pay large fees, we will allow the expansion of technology to squeeze out the independent small businesses and non-commercial little guys producing blogs, and other small sources of data, and opinion now so easily available—and in the process destroy the greatest public forum in history.

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Thus, in a sense, this article is the public law side of the issues I grappled with in Rough Justice. We need to rethink many of our old-tech paradigms in this cyber-era of diffusion, political and electronic. In both public and private law, we have to think outside legal boxes to recognize when we need new paradigms and to remember that those new paradigms must reflect both what came before them and what did not.

II. TECHNOLOGY’S IMPACT

A. Invention as Creator of Law: The Printing Press and Freedom of Expression

My underlying thesis is that as technology changes, law, along with our society in general, changes, often unconsciously. To illustrate, we might start at the beginning of modern times. Some time around 1450, building on existing machines, Johannes Gutenberg invented the printing press and movable type. Because of the printing press, mass communication became more than talking to a crowd or a church congregation. The Gutenberg Bible, as a result, is viewed by many intellectual historians as the most important document of modern times, comparable in its intellectual impact only to long-distance communication one hundred years ago and the computer and the Internet today. Two generations later, Martin Luther spearheaded the Protestant challenge not only to Catholic hegemony but to the monopoly of priests on the interpretation of the Bible. Because of this confluence of movable type and the Reformation, not only could

7. I realize that this account can be dismissed as Eurocentric; the Chinese apparently invented movable type much earlier, just as they invented spaghetti before the Italians. We are also told that the Koreans were involved.

8. His ninety-five theses were translated from Latin into German, printed soon after he nailed them to the door of the Castle Church at Wittenburg in 1517, and widely and quickly disseminated throughout Europe. I MARTIN BRECHT, MARTIN LUTHER 204-05 (James L. Schaff trans., 1985-93).


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a layman assert his opinion of Christian doctrine, but he could own a Bible, read it in his own language, and adjust his beliefs accordingly, a development viewed as subversive by conservative governments.

William Caxton set up the first printing press in England in 1476,\(^{10}\) and initially the authorities encouraged book selling and printing.\(^{11}\) By the mid-sixteenth century, however, Henry VIII, through grants of monopolies, designation of official printers, and licensing and prosecution of those who offended the Crown,\(^{12}\) had established governmental control over printing presses.

Religion, while not alone, was the driving force for the control of the presses,\(^{13}\) though protection of royal prerogatives became increasingly important during Henry VIII’s reign and in the interregnum between his reign and that of Queen Elizabeth I.\(^{14}\) The Crown used means of censorship other than the technological, but control over the physical machinery was its most important device. As the sixteenth century moved on, Queen Elizabeth increased the control over printing through a combination of licensing, the grant of a monopoly to the Stationers Company tied to a requirement that all master printers register their presses with the Company, and an ordinance requiring approval of all new master printers by the High Commission for Causes Ecclesiastical.\(^{15}\) Queen Elizabeth’s successors, the Stuart kings, James I and Charles I, were Scots who held a more autocratic view of the sovereign’s powers and faced increasing opposition from Puritan Protestants. The Stuarts had established their legal prerogative to control the printing trade and with it the dissemination of news, but, in practice, their control of the trade broke down, as did their control of the nation.

The licensing laws were allowed to lapse in 1641, during the battles between Charles I and Parliament that led to the English Civil War and Charles’s beheading, and with this lapse, printing technology again showed its impact. According to Vincent Blasi, “[b]y one count, the number of pamphlets published during the year 1640 was 22; in 1642 it was 1,966.”\(^{16}\) Another writer, Sharon Achinstein, has pointed out how the explosion of printing after the licensing laws lapsed interacted with social change: since literacy had increased considerably, pamphleteers could address a much more popular audience than previous

\(^{10}\) FREDICK SEATON SIEBERT, FREEDOM OF THE PRESS IN ENGLAND 1476-1776, at 22-25 (1965).

\(^{11}\) Id. at 25.

\(^{12}\) Id. at 30-40, 47-51.

\(^{13}\) Id. at 41-64.

\(^{14}\) Id. at 50 (under Henry), 52-54 (under the child king, Edward VI), 55-56 (under the Catholic Queen Mary).

\(^{15}\) Id. at 64-87.

polemicists. She quotes Samuel Harlib, who wrote in 1641 that “the art of Printing will so spread knowledge that the common people, knowing their own rights and liberties will not be governed by way of oppression.”

In 1643, however, Parliament reintroduced control of printing, appointed licensers who functioned as censors, gave a monopoly to a small number of master printers, and used these master printers to hunt out those who printed without a license. It is not surprising that when John Milton rose in Parliament the next year to give his great speech Areopagitica, he subtitled this bedrock statement of freedom of communication “A Speech for the Liberty of Unlicensed Printing.” Milton himself had been denied licenses for several of his works, which he published anyway. Blasi concedes that it may have been Milton’s own problems with the censors that led to the Areopagitica but says that

[i]t is also possible that he wrote Areopagitica at the behest of the journeymen printers of the City of London. This politically active group, with whom Milton was in contact, saw its livelihood threatened by the prospect of strict enforcement of the Licensing Order for the benefit of the limited number of master printers favored by Parliament with monopoly privileges.

Not for the last time, we see here a marriage of high principle and a desire for a piece of the technological pie. It is not my purpose to write about the Areopagitica itself, but quoting its most famous passage explains its impact over nearly four centuries:

And though all the winds of doctrine were let loose to play upon the earth, so Truth be in the field, we do injuriously, by licensing and prohibiting, to misdoubt her strength. Let her and Falsehood grapple; who ever knew Truth put to the worse, in a free and open encounter?

It is, of course, impossible for us to imagine a world without mass communication, but we cannot ignore the direct impact of the printing press on intellectual freedom. While there have probably always been demands for freedom, we can see why Michigan State University Journalism School Dean Fred Siebert dated his classic history of freedom of the “press” (note the term) from the moment in 1476 when the printing presses arrived in England. In fact,
it is fair to say that our entire concept of freedom of mass communication dates from the invention of the printing press.

The Internet neutrality debate is a contemporary analog to the historical disputes over printing. The Journeymen Printers of London, who fought against Charles I’s and Parliament’s restrictions on the printing trade—on both the right to print and the right to write—are paralleled today by those who call for open access to the critical infrastructure of the Internet to avoid control by a small number of telephone and cable companies of both the means of transmission and the substance of the information, and the services carried on the Internet. Against open access advocates, however, the ISPs point out that content providers, in many instances, are not ink-stained wretches but billion-dollar corporations like Google, eBay, and Amazon. On a more conceptual basis, many ISPs and libertarians, as well as some economists, argue that the real issue, now as for Milton and the Journeymen, is government of the technology. Thus, Milton’s battle metaphor is paralleled by Holmes’ similar dictum about free trade in ideas, and that, with respect to the Internet, the government should just stay out: the invisible hand of the market will be the best protector of the “marketplace” (sic) of ideas.

B. Invention as Modifier of Law: Air (and Space) Power and the Law of Real Property

Of course, most technological changes do not create anything as grand or important as freedom of expression, but others have had powerful impacts in unexpected places. For centuries, the standard rule of property was that you owned not merely the surface of your property but the air space above it “as high as the sky”—in Latin, usque ad coelum. This rule worked just fine—as long as we lacked the technology to fly. In 1946, however, in United States v. Causby, the United States Supreme Court faced a claim that Army and Navy aircraft use of the airspace above the plaintiffs’ chicken farm to land at an adjacent airport was a taking of property without just compensation under the Fifth Amendment. Anyone who has ever lived near an airport must sympathize with


23. But when men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market; and that truth is the only ground upon which their wishes safely can be carried out.


the plaintiffs: they lost 150 chickens that panicked and flew into the walls, they could not sleep, the noise was “startling,” and their home and farm were lit up in the night by the glare from the planes. This sounds like a good tort claim for nuisance or trespass, but they were forced to make a property claim under the Constitution because the United States had not yet waived its sovereign immunity for tort actions.\(^26\)

Justice William O. Douglas addressed the common law rule:

It is ancient doctrine that at common law ownership of the land extended to the periphery of the universe—*Cujus est solum ejus est usque ad coelum*. But that doctrine has no place in the modern world. The air is a public highway, as Congress has declared. Were that not true, every transcontinental flight would subject the operator to countless trespass suits. Common sense revolts at the idea. To recognize such private claims to the airspace would clog these highways, seriously interfere with their control and development in the public interest, and transfer into private ownership that to which only the public has a just claim.\(^27\)

Justice Douglas’s statement about “transfer into private ownership that to which only the public has a just claim” makes a critical claim over property rights in arguably public assets and resonates, sixty years later, through current issues of telecommunications, especially those regarding control of the Internet. In *Causby*, however, Douglas indicated that there was something left to the idea of ownership of air space.

The landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land... The superadjacent airspace at this low altitude is so close to the land that continuous invasions of it affect the use of the surface of the land itself. We think that the landowner, as an incident to his ownership, has a claim to it and that invasions of it are in the same category as invasions of the surface.\(^28\)

Thus, an involuntary servitude (to allow planes to fly at low altitudes for landings) had been imposed upon the land, which constituted a taking under the Fifth Amendment.\(^29\) In so holding, the Court cut back the airspace property

\(^{26}\) The Federal Tort Claims Act, Pub. L. No. 80-773, 62 Stat. 869 (1948) (codified at 28 U.S.C. §§ 1346(b), 2671-2680 (2006)) had not yet been enacted, and the Court of Claims had jurisdiction only over constitutional claims and claims under express or implied in fact contracts.

\(^{27}\) *Causby*, 328 U.S. at 260-61 (citing for the common law rule, 1 Coke, Institutes, Ch. 1, § 1 (4a) (19th ed. 1832); WILLIAM BLACKSTONE, 2 COMMENTARIES 18 (William Draper Lewis ed., 1902); 3 JAMES KENT, COMMENTARIES 621 (Gould ed., 1896)).

\(^{28}\) *Causby*, 328 U.S. at 264-65.

\(^{29}\) *Id.* at 266-67.
concept in light of technological common sense but still kept it in a modified form to protect against what really were nuisances.

Even this modest resurrection of the *usque ad coelum* rule was too much for Justice Hugo Black, who dissented. Justice Black said the claim about noise and glare causing damage was at best a tort claim and the government had not consented to be sued for torts. He spoke against the “sweeping” meaning given property in the majority opinion and then focused on the technology:

> The future adjustment of the rights and remedies of property owners, which might be found necessary because of the flight of planes at safe altitudes, should, especially in view of the imminent expansion of air navigation, be left where I think the Constitution left it, with Congress.\(^{30}\)

Justice Black ended his dissent with a long paragraph about the confusion that could be brought about by courts hampering Congress in its efforts to keep the air free:

> Old concepts of private ownership of land should not be introduced into the field of air regulation... The noise of newer, larger, and more powerful planes may grow louder and louder and disturb people more and more. But the solution of the problems precipitated by these technological advances and new ways of living cannot come about through the application of rigid constitutional restraints formulated and enforced by the courts.\(^{31}\)

Thus, we see the majority in our Supreme Court rejecting most of the old property doctrine, in the light of technology, and a dissenter complaining that it hadn’t rejected the doctrine fully enough—in the light of technology. Both positions made sense. It is relatively clear that Douglas had no great disagreement with Black over not tying Congress’s hands, but Douglas wanted to do justice to the small landowners whose home and chicken farm had been rendered almost useless, while Black wanted to make sure that no one, individual or corporate, could exact a rent on the sky as used for the national purpose of air travel.\(^{32}\) Neither seriously wanted to give landowners a veto over air traffic or a property interest in true air travel.

But we still keep the *usque ad coelum* in international law, as we learn every time a third world country refuses us air rights when we want to ferry troops to...

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30. *Id.* at 271 (Black, J., dissenting).
31. *Id.* at 274.
32. *Id.* at 271 (“No rigid Constitutional rule, in my judgment, commands that the air must be considered as marked off into separate compartments by imaginary metes and bounds in order to synchronize air ownership with land ownership. I think that the Constitution entrusts Congress with full power to control all navigable airspace.”).
one invasion or another. In fact, Article 1 of the Convention on International Civil Aviation of 1944 provides that “every State has complete and exclusive sovereignty over the airspace above its territory.” This is based more on notions of nationhood than property ownership, but, even here, we have new problems caused by technological development. Article II of the Outer Space Treaty states that “[o]uter space . . . is not subject to national appropriation,” so the writers say that the issue is where outer space begins—the air space above a country is subject to its sovereignty, but outer space is not. A private airplane-like vehicle named SpaceShipOne recently won a $10 million prize for sustained flight at 100 kilometers’ height. Given the plans of Sir Richard Branson’s Virgin Galactic to fly thousands of passengers on sub-orbital flights by 2009 and Stephen Hawking’s announced desire to be one of them, the technology-laden question is whether Hawking will be greeted as a space tourist or shot down as an invader.

Even though the justices acted sensibly in *Causby*, their tilting with the interplay of modern air traffic and ancient property doctrine should give us pause with respect to the Internet. The courts, Congress, and the administrative regulators have before them a multi-billion dollar infrastructure of staggering complexity and sophistication. Should it be treated as a common carrier, as the telephone system used to be and to a degree still is, or should it be treated as an information system, with minimal governmental oversight over access and

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33. See, e.g., David S. Cloud, *Military Seeks Alternatives in Case Turkey Limits Access*, N.Y. TIMES, Oct. 12, 2007, at A12 (discussing Turkey’s threats to limit both flights and ground access because of American criticism of Turkey’s treatment of Armenians in 1915); Michael R. Gordon & Eric Schmitt, *Threats and Responses: Diplomacy; Turkey Saying No to Accepting G.I.’s in Large Numbers*, N.Y. TIMES, Dec. 4, 2002, at A1 (noting that Turkey would not allow the use of its airspace or NATO airbases on its territory for the U.S. led invasion of Iraq without a new U.N. Security Council Resolution authorizing force); Alan Cowell, *Confrontation in the Gulf: Jordan; Seeing War Near, King Hussein Vows to Protect Jordan’s Land and Sky*, N.Y. TIMES, Jan. 16, 1991, at A13 (reporting on a television address by Jordan’s King Hussein during the Gulf War, who vowed to “protect the land and skies of our country and prevent anyone from crossing in one direction or the other”).


content control? Or are there other ways to protect the interests of those who build the transmission system without endangering the rights of those who use it?

C. Invention as Destroyer of Law: The Supreme Court, VCRs, and Hard-Core Porn

At other times, changing technology may undermine an existing rule of law in practice, overruling it de facto, if not on the books. For sixteen years, from Roth v. United States in 1957 to Paris Adult Theatre I v. Slaton and Miller v. California in 1973, dirty movies were one of the Supreme Court’s biggest areas of litigation, to such an extent that the Court had a makeshift theater in the basement of the Supreme Court building so that the justices could decide the factual issues of “obscenity” first hand. While the early cases usually involved art house movies that had shocked someone’s prim sensibilities, by the late sixties and early seventies, the Court was dealing with much harder stuff, and movies like Deep Throat and Debbie Does Dallas were playing in respectable neighborhoods. The Warren Court almost always struck down the censors, but it admitted that it could not come up with a majority for any one theory, and the most notable rule that came out of that era was Justice Potter Stewart’s iconic “I know it when I see it” dictum in Jacobellis v. Ohio.

By 1973, however, Richard Nixon had made four appointments to the Court, and a new majority appeared. In a group of cases led by Paris Adult Theatre I v. 

40. 413 U.S. 49 (1973).
42. See Bob Woodward & Scott Armstrong, The Brethren: Inside the Supreme Court 192-204 (1979).
43. See, for example, Joseph Burstyn, Inc. v. Wilson, 343 U.S. 495 (1952), in which New York State refused a license to Roberto Rossellini’s The Miracle as “sacrilegious” because it involved a seducer who convinced a naive girl that he was Saint Joseph and she would be a new Virgin Mary. See generally Marjorie Heins, Culture on Trial: Censorship Trials and Free Expression, http://www.fepproject.org/commentaries/cultureontrial.html#filmcens (last visited Sept. 11, 2007) (on file with the McGeorge Law Review). Another example of the early censors’ sensibilities was the denial in 1953 of a production code seal to Otto Preminger’s The Moon Is Blue because David Niven asked Maggie MacNamara “Are you a virgin?” Preminger successfully released the movie without a seal and in the process took a major step toward undermining the code. See Albert W. Harris Jr., Comment, Movie Censorship and the Supreme Court: What Next?, 42 CAL. L. REV. 122, 123-24 (1954).
44. A short but characteristically perceptive analysis, written in the seventies, can be found in Harry Kalven, Jr.’s posthumous A Worthy Tradition: Freedom of Speech in America 32-53 (Jamie Kalven ed., 1988).
46. I have reached the conclusion . . . that under the First and Fourteenth Amendments criminal laws in this area are constitutionally limited to hard-core pornography. I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that. Jacobellis v. Ohio, 378 U.S. 184, 197 (1964) (Stewart, J., concurring) (footnotes omitted).
Slaton and Miller v. California, the Burger Court ruled that depictions of sexual intercourse and the like could be criminalized and suppressed if they violated specified guidelines. In the more than thirty years since, "obscenity," as the Court calls hard core pornography, has been criminalizable, and has, in fact, been made criminal all over the country. As a result, today the modern Court almost never hears a case factually challenging a conviction for selling or making hard core pornography, and the forces of decency have few legal impediments to suppressing it.

There is only one flaw in this analysis. Hard core porn is available everywhere. The reasons, of course, are the VCR and the Internet. The VCR came into popular consciousness soon after Miller, and it is generally agreed that the ability to watch pornographic tapes in your own home was what made the VCR a success early on. Now, not only can the aficionado of porn call an 800 number to get tapes and CDs, he can download the material from the Internet, which has over one hundred fifty million (that’s what I said!) sites referring to porn. With this much competition, one suspects that most district attorneys do not bother prosecuting local stores or Internet providers that sell porn, for even if they win an expensive trial and appeal process, they won’t appreciably affect the amount of porn available to their constituents, whether by mail, phone, or download. All the plans of anti-obscenity forces in the courts and Congress

47. 413 U.S. 49 (1973).
49. It is possible, however, to give a few plain examples of what a state statute could define for regulation . . . : (a) Patently offensive representations or descriptions of ultimate sexual acts, normal or perverted, actual or simulated. (b) Patently offensive representations or descriptions of masturbation, excretory functions, and lewd exhibition of the genitals. Id. at 25 (Burger, C.J., majority opinion). I have always wondered which “ultimate sexual acts” Chief Justice Burger considered “normal” and which he considered “perverted.” There are other important requirements in the Miller test such as lack of serious literary, artistic, political, or scientific value. See id. at 24.
50. In ordinary English “obscenity” means vulgar language, while “pornography” means extremely erotic exploitative literature and art. The Supreme Court, however, uses “obscenity” as a constitutional term of art covering only erotic matter that is deemed outside the coverage of the First Amendment, see Roth, 354 U.S. 485-89; and that satisfies the current criteria, see Miller, 413 U.S. at 23-25; see also supra note 49. It uses “pornography” as a generic term for erotic depictions and writings that may or may not be bannable. See infra note 53.
51. Entering the word “porn” into Google on October 2, 2007, produced about 151,000,000 references to “porn,” an increase of 35,000,000 sites from a search made about a year before. The search took Google 0.11 seconds. For rumination that this proliferation may be socially beneficial, see Anthony D’Amato, Porn Up, Rape Down (Nw. Pub. L. Res., Paper No. 913013, 2006), http://ssrn.com/abstract=913013 (on file with the McGeorge Law Review). Of course, not every Internet site referring to porn contains pornography. For instance, Professor D’Amato’s paper is also accessible by punching in “porn” on Google. Nonetheless, a huge number of the references are to actual porn sites.
52. It is technologically possible to block Internet porn, as China and Saudi Arabia do with regularity. See JACK GOLDSMITH & TIM WU, WHO CONTROLS THE INTERNET?: ILLUSIONS OF A BORDERLESS WORLD 29, 96 (2006). As Goldsmith and Wu easily show, the cost to the United States of doing so would be much too great for a nation that prizes freedom of expression, and has a court system that zealously protects it and would enjoin any wholesale filtering of controversial material. Id. at 83-84.
became meaningless in light of the changes forced, without anyone’s conscious plans, by evolving technology.\footnote{53}

Turning to the Internet, the hapless antics of the Court and Congress in trying to dam the tide of pornography in the face of new technology should serve as a warning even to those who, like the author, are not afraid of government regulation per se. Congress and the Federal Communications Commission (FCC) have an abysmal record in trying to control the future of informational technology, especially with respect to television and modern telephone service. From the earliest days after World War II, American communications policy exalted local control over TV, the vision apparently being of thousands of local stations putting on high quality decentralized programming.\footnote{54} What actually

\footnote{53. There remains widespread resistance to “kiddie porn,” sexual material involving children under circumstances that do not satisfy the definition of “obscenity” in \textit{Miller}. See \textit{Miller}, 413 U.S. at 23-25; \textit{see also supra note 49}. In \textit{New York v. Ferber}, 458 U.S. 747 (1982), the Court held its sale criminalizable, as the only practicable way to reduce the injury—actual sexual abuse by someone not prosecutable under the child rape laws—to the children shown in the movies, and in \textit{Osborne v Ohio}, 495 U.S. 103 (1990), it extended \textit{Ferber} to reach those possessing child pornography. By 1996, however, technology had again intervened and the Justice Department convinced Congress that computer graphics had made it very difficult to prove in a prosecution that an actual child was involved. Congress responded with the Child Pornography Prevention Act (CPPA) of 1996, Pub. L. 104-208, 110 Stat. 3009-26 (codified as amended at 18 U.S.C. §§ 2251, 2252A, 2256). The CPPA made criminal “any visual depiction, including any . . . computer or computer-generated image [CGI] or picture” that “is, or appears to be, of a minor engaging in sexually explicit conduct.” See 18 U.S.C.A. §§ 2252A, 2256(6)(B) (West 2000 & Supp. 2007) (amended 2003). Thus, Congress had created a new crime, the use of Computer-generated imagery (CGI) to produce “virtual child pornography.”

In \textit{Ashcroft v. Free Speech Coalition}, 535 U.S. 234 (2002), the Court held provisions of the CPPA unconstitutional. Justice Anthony Kennedy, speaking for the Court, pointed to \textit{Ferber}’s concern for the child participants, and contrasted the CPPA, which “prohibits speech that records no crime and creates no victims by its production. Virtual child pornography is not ‘intrinsically related’ to the sexual abuse of children . . . . [T]he causal link [between the images and child abuse] is contingent and indirect.” \textit{Free Speech Coal.}, 535 U.S. at 250. Congress tried to resurrect the statute by corrective legislation under the acronym of the PROTECT Act, but the Eleventh Circuit struck the legislation down as overbroad and vague in \textit{United States v. Williams}, 444 F.3d 1286 (11th Cir. 2006) (Reavley, J., majority), cert. granted, 127 S. Ct. 1874 (2007). \textit{See also Prosecutorial Remedies and Other Tools to end the Exploitation of Children Today (PROTECT) Act of 2003}, Pub. L. No. 108-21, 117 Stat. 650 (codified in scattered sections of 18, 28, and 28 U.S.C.). I think the significance of \textit{Ashcroft v. Free Speech Coalition} is that in an age of increasing distrust of free speech for out-groups like terrorists and pedophiles, the Court not only was unwilling to extend \textit{Ferber} to CGI, but used CGI as a vehicle for affirming the essential notion that we all have a fundamental right to think bad thoughts. The existence of CGI emphasized that underlying the CPPA was not the worry of losing a criminal case based on a far-fetched defense but disapproval of men who masturbated at home over pictures of children—even if no children were really involved. To my mind, the most essential form of liberty is that the government cannot punish you for what you think, and technological improvements in CGI gave the Court the opportunity to reiterate this bedrock, but unpopular, notion. What the Court will do in \textit{Williams} is, of course, a matter of divination and thus beyond the author’s expertise.

happened was that local stations rarely had anything more original than traffic reports and the six o’clock news. At the same time, the apportionment of signals necessary to have a large number of local stations made it impossible to have more than three national networks. This, in turn, killed the possibility of regional networks like the Dumont Television Network, a small network owned by a TV pioneer and the original network home of the genius of early television comedy, Ernie Kovacs. Congress and the FCC tried to increase the number of stations through ultra high frequency (UHF) signals, even requiring set manufacturers to include UHF on all sets, though few viewers wanted it. UHF was an inferior technology, and it was not until UHF stations were carried on basic cable that they began to flourish.

Yet the FCC spent years fighting cable, nominally because it threatened the local free ideal and invaded copyright holders’ rights, and because the FCC was protecting the entrenched interest of broadcasters. Eventually cable triumphed, but even then, as the courts, the FCC, and Congress worked on the breakup of the original AT&T, the government regulators ignored the coming role of both cable and cell phones in data transmission, local phone service, and the transmission of voice over the Internet. If cable TV and the AT&T breakup have worked for the public good (a disputed question), they have done so in spite of, and not because of, government technology planning.
III. DEALING WITH CHANGE: ROGER TANEY AND THE
CHARLES RIVER BRIDGE CASE

What should be our legal attitude toward technological change? I find instruction in an opinion written in 1837 by Roger B. Taney, the fifth Chief Justice of the United States. Taney succeeded John Marshall and served from 1836 to 1864. Since he and Marshall led the Court from the presidency of John Adams to that of Abraham Lincoln, he is a very important figure. In fact, however, Taney is most often remembered for writing the most disastrous opinion in the history of the Supreme Court, Dred Scott v. Sandford,69 and for his intellectual dishonesty in reading the Constitution inconsistently to achieve results favoring slavery, despite protestations of neutrality.60 Nonetheless, I think he wrote at least one first-rate opinion, near the beginning of his career on the bench, in the 1837 Charles River Bridge Case.61

The Charles River Bridge Case was a very closely watched case involving some of the greatest lawyers of the day, including Daniel Webster and William Wirt. It had been argued before the Court two years earlier, while Chief Justice

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59. 60 U.S. (19 How.) 393 (1856). Dred Scott held the Missouri Compromise of 1820 unconstitutional, saying that Congress had no power to ban slavery in the territories, a direct cause of the Civil War, and also held that even freely born blacks could not be American citizens. It was overruled by the Thirteenth and Fourteenth Amendments—and by the Civil War itself.

60. In contrast to John Marshall’s strong nationalism, see, for example, M’Culloch v. Maryland, 17 U.S. (4 Wheat.) 316 (1819); Cohens v. Virginia, 19 U.S. (6 Wheat.) 264 (1821), Taney wrote opinions finding states’ rights in areas that could easily be seen as national, such as immigration, see, for example, The Passenger Cases, 48 U.S. (7 How.) 283, 464-94 (1849) (Taney, C.J., dissenting); and interstate commerce., see, for example, The License Cases, 46 U.S. (5 How.) 504, 573-86 (1847) (Taney, C.J., concurring). In addition, Taney joined the majority in Mayor, Aldermen, and Commonalty of New York v. Miln, 36 U.S. (11 Pet.) 102 (1837), upholding New York City’s restrictions on foreign passengers arriving aboard ships. There is nothing dishonest about this. When federal law favored slave owners, however, particularly through the various fugitive slave laws, Taney strongly enforced the federal law and found that it implicitly trumped state law protecting blacks. See, e.g., Prigg v. Pennsylvania, 41 U.S. (16 Pet.) 539, 628 (1842) (Taney, C.J., concurring) (arguing that the fugitive slave clause of the Constitution not only forbids states from interfering with the process of catching runaway slaves but requires them to pass laws to aid the masters); Ableman v. Booth, 62 U. S. (21 How.) 506 (1859) (upholding the Fugitive Slave Law of 1850 with broad dicta about the limitations on state sovereignty in the United States Constitution). On the other hand, he had favored state power in Strader v. Graham, 51 U.S. (10 How.) 82 (1850), in which a Kentucky court had given damages against a person who had helped an alleged slave escape. In Strader, he held that nothing in the Constitution inhibited a state’s right to determine the status of the slave, though there was an argument that the slave had been freed by living temporarily in a free state. In his notorious Dred Scott opinion, 60 U.S. (19 How.) 393, he found no federal power to bar slavery in the territories, despite the explicit words of Article IV, § 3: “The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States . . . .” U.S. Const. art. IV, § 3, cl. 2; see Dred Scott, 60 U.S. (19 How.) at 432-52. In his dissent in The Passenger Cases, Taney darkly warned that the majority’s decision that a state could not bar immigrants from entering it permitted Congress to grant emancipated slaves from the West Indies the right to live freely in the Southern States. Though Miln did not directly involve slavery and race, Taney has been seen as using the case to uphold indirectly the southern Negro Seamen’s Acts, by which states forbade black sailors from leaving ships calling at southern ports. See HAROLD M. HYMAN & WILLIAM M. WIECK, EQUAL JUSTICE UNDER LAW 78-80 (New Am. Nation Series, Henry Steele Commager & Richard B. Morris eds., 1982).

Marshall was still alive, but was set for reargument. Nearly two hundred years earlier, in 1640, the Massachusetts Legislature had granted the newly formed Harvard College a license to operate a ferry across the Charles River between Boston and Charlestown, and in 1650, in Taney’s words, it gave Harvard “the liberty and power to dispose of the ferry . . . by lease or otherwise, in the behalf and for the behoof of the college.” Harvard operated the ferry through lessees and agents until 1785, when the Legislature incorporated the Proprietors of the Charles River Bridge and authorized them to build and operate a bridge “where the ferry is now kept” and to charge tolls, paying annual compensation to Harvard. The Proprietors were initially given a forty-year charter from the bridge’s opening in 1786, but in 1792, when another bridge was authorized between the western part of Boston, about three miles away, and Cambridge, the charter was extended to seventy years to compensate the Charles River Bridge Proprietors for the probable diminution of their profits.

The Proprietors operated the Charles River Bridge for more than forty years, making a tidy profit from the toll, since the bridge had long since been paid off. The toll, however, became politically unpopular, and in 1828, the Legislature authorized a competing bridge, the Warren Bridge, that would be built within a few hundred feet of the Charles River Bridge’s entrance, and would become free as soon as its costs were paid off and a small profit was made. By the time the case got to the Supreme Court, the Warren Bridge was free and the Charles River Bridge was worthless. The Charles River Bridge Proprietors sued the proprietors of the Warren Bridge, arguing that the Warren Bridge grant impaired the obligation of the earlier grant, in violation of the Contract Clause of the United States Constitution.

The Proprietors had a strong factual argument, given the Legislature’s treatment of the Harvard ferry grant and the compensation the Legislature had given the Proprietors in 1792, when the bridge to Cambridge was built. They also had a strong constitutional argument. The Marshall Court had struck down several attempts by states to undo grants that they had previously made. By

64. Id. at 586 (Story, J., dissenting).
65. See U.S. CONST. art. I, § 10 (“No State shall . . . pass any . . . law impairing the Obligation of Contracts . . . .”).
66. In Fletcher v. Peck, 10 U.S. (6 Cranch) 87 (1810), the Court held that the Georgia Legislature was unable to take back the Yazoo Land Grab in which a bribed legislature had sold thirty million acres of public land for less than two cents an acre. In Dartmouth College v. Woodward, 17 U.S. (4 Wheat.) 518 (1819), the Court struck down New Hampshire’s attempt to change the terms of Dartmouth’s charter, and almost simultaneously it held in Sturges v. Crowninshield, 17 U.S. (4 Wheat.) 122 (1819), that a state could not discharge debtors of their contractual obligations, even upon surrender of their property. These cases are described as applying a vested rights theory, and the Marshall Court was quick to find that rights flowing from a grant from the government had vested and thus were unimpeachable.
1837, however, John Marshall was dead and the Court that he had dominated for nearly thirty-five years was less monolithic.67 The Court upheld the Massachusetts legislative action in an opinion by Taney. Its actual holding was that a grant of the sovereign is to be construed narrowly since the public fisc is involved.68 Therefore, the grant to the Proprietors of the Charles River Bridge was not to be construed as impliedly giving them a monopoly, and the Legislature was free to charter another bridge in direct competition and toll-free.69 Justice Joseph Story, the most erudite of the justices and a long-time colleague of Marshall’s, dissented at length,70 making strong arguments to the contrary, relying on a long line of English cases in which grants to operate ferries were construed to bar other ferries sufficiently close to affect the original ferry’s receipts.71 Story combined this “ancient ferries” line with the fact that Harvard’s ferry grant seemed to have been treated as exclusive and that the Proprietors of the Charles River Bridge had been paying Harvard £200 per annum as compensation. To these he added his view of natural fairness:

But the argument [for the Warren Bridge Proprietors] presses the doctrine to an extent which it is impossible can be correct, if any principles respecting vested rights exist, or have any recognition in a free government. What is it? That all ferries in Massachusetts are revocable and extinguishable at pleasure. . . .

The doctrine then is untenable. The moment that you ascertain what the terms and stipulations of a grant of a ferry, or any other franchise, are, that moment they are obligatory. They cannot be gainsaid, or resumed. So this Court has said in the case of Fletcher v. Peck, 6 Cranch 87[; and so are the unequivocal principles of justice, which cannot be overturned without shaking every free government to its very foundations. 72

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67. Even while Marshall was alive, the changing personnel on the Court had weakened the vested rights theory. In Ogden v. Saunders, 25 U.S. (12 Wheat.) 213 (1827), the Court had held, despite Sturges v. Crowninshield, 17 U.S. (4 Wheat.) 122, that a state insolvency law could discharge debtors for debts incurred after the law was passed. Ogden v. Saunders is the only constitutional decision of the Court from which Marshall dissented. On the changes on the Court, see White, supra note 62; HUMAN & WIECEK, supra note 60, at 59-63.

68. Proprietors of Charles River Bridge, 36 U.S. (11 Pet.) at 545-46 (Taney, C.J., majority opinion) ("[I]t would present a singular spectacle, if, while the courts in England are restraining, within the strictest limits, the spirit of monopoly, and exclusive privileges in nature of monopolies, and confining corporations to the privileges plainly given to them in their charter, the courts of this country should be found enlarging these privileges by implication; and construing a statute more unfavourably to the public, and to the rights of the community, than would be done in a like case in an English court of justice.").

69. Id. at 548-53.

70. See id. at 583-650 (Story, J., dissenting).

71. Id. at 620-35.

72. Id. at 633-34.
Taney ignored the ferry cases,\textsuperscript{73} relying heavily on a contemporary English canal case holding “that any ambiguity in the terms of the contract must operate against the adventurers, and in favor of the public, and the plaintiffs can claim nothing that is not clearly given them by the act.”\textsuperscript{74}

It is possible to see the dispute between Story and Taney merely as one between conflicting views of political economy—the static, pre-industrial mercantilism of vested rights that gave a grantee a monopoly and protected him from competition; or the liberal, Industrial Revolution-based laissez-faire that put its faith in the market, even if it destroyed the grantee.\textsuperscript{75} Taney, however, justified his liberal economics on a more instrumental ground, an approach directly relevant to the Internet neutrality issue. Any other approach allowed vested rights to block technological progress:

Indeed, the practice and usage of almost every State in the Union, old enough to have commenced the work of internal improvement, is opposed to the doctrine contended for on the part of the plaintiffs in error. Turnpike roads have been made in succession, on the same line of travel; the later ones interfering materially with the profits of the first. These corporations have, in some instances, been utterly ruined by the introduction of newer and better modes of transportation, and traveling. In some cases, railroads have rendered the turnpike roads on the same line of travel so entirely useless, that the franchise of the turnpike corporation is not worth preserving. Yet in none of these cases have the corporations supposed that their privileges were invaded, or any contract violated on the part of the state.\textsuperscript{76}

Taney continued:

And what would be the fruits of this doctrine of implied contracts on the part of the states, and of property in a line of travel by a corporation . . . ? . . . If this Court should establish the principles now contended for, what is to become of the numerous rail roads established

\textsuperscript{73} Justice McLean, who said that the merits were on the side of the Charles River Bridge proprietors but that the Court had no jurisdiction, \textit{id.} at 584, rejected the ancient ferry cases as not adapted to the conditions of the United States. \textit{Id.} at 562-63.

\textsuperscript{74} \textit{Id.} at 544 (quoting Proprietors of the Stourbridge Canal v. Wheeley, 109 Eng. Rep. 1336, 1337 (1831)).

\textsuperscript{75} It also seems generational, except that Story was actually two years younger than the new Chief Justice. Story had been appointed to the Court when he was thirty-two, the youngest justice ever, but he had already sat on the Court for twenty-five years when Taney joined it at fifty-nine. Story certainly reflects an older point of view.

\textsuperscript{76} \textit{Proprietors of Charles River Bridge}, 36 U.S. (11 Pet.) at 551-52.
on the same line of travel with turnpike companies; and which have rendered the franchises of the turnpike corporations of no value? 

Story paraphrased this argument as “unless such a reservation of power [to defeat a prior grant] exists, there will be a stop put to the progress of all public improvements.” His answer was that “[i]f the public exigencies and interests require that the franchise of Charles River Bridge should be taken away, or impaired; it may be lawfully done upon making due compensation to the proprietors.”

Taney replied,

Let it once be understood that such charters carry with them these implied contracts, and give this unknown and undefined property in a line of traveling; and you will soon find the old turnpike corporations awakening from their sleep, and calling upon this Court to put down the improvements which have taken their place. . . . We shall be thrown back to the improvements of the last century, and obliged to stand still, until the claims of the old turnpike corporations shall be satisfied; and they shall consent to permit these states to avail themselves of the lights of modern science . . . .

To be sure, Story tried to argue that progress came equally from the assurance given investors that their grants would not be undermined, but that was secondary. His essential argument was that property rights need to be protected for their own sake and that government may not undermine them, even in the name of progress. I read Taney as arguing for a different telos. The government should not interfere with progress because progress is an end in itself.

I cannot say if he appreciated how much of a change the newly invented railroad would make a generation later, after the Civil War, and how steam would make sailing vessels obsolete after a thousand years of sea traffic, but his opinion seems to sense that the United States was on the edge of a radically

77. Id. at 552.
78. Id. at 637-38.
79. Id. at 638.
80. Id. at 552-53.
81. Id. at 605 (“And if no persons can be found willing to undertake such a work, unless they receive in return the exclusive privilege of erecting it, and taking toll; surely it cannot be said, as of course, that such a grant, under such circumstances, is, per se, against the interests of the people.”).
82. The Charles River Bridge decision exemplified what Willard Hurst has identified as the nineteenth century’s preference for ‘dynamic’ as opposed to ‘static’ capital. By stimulating the release of energy necessary to the realization of men’s creative capabilities, judges encouraged the types of investment that would promote the exploitation of resources.

HYMAN & WIECEK, supra note 60, at 51, 58. Hyman and Wieck further quote Hurst: “the nineteenth-century United States valued change more than stability. . . . We were concerned with protecting private property chiefly for what it could do. . . .” Id. at 58-59 (quoting JAMES WILLARD HURST, LAW AND THE CONDITIONS OF FREEDOM IN THE NINETEENTH-CENTURY UNITED STATES 24 (1956)).
different technological future that would change it, as it did, over the remainder of the nineteenth century, from a small town, bucolic and agrarian little country, just beginning its western trek by wagon train, to a continental nation with worldwide aspirations. To me, his opinion says that the law must be aware of its effect on technological change and must not let old forms and old ways of thinking stifle innovation. Even more, we must not give those who control the old technology power to exert a toll over the new, whether by preventing change or by charging either the public or the new entrepreneurs a rent for the right to do new things. To the modern mind, this does not mean that government must trust in the market alone or that all change is for the good, but it does mean that we must recognize that technology can change the law by requiring us to rethink it—or to apply it anew—in light of both history and the physical changes taking place.

IV. THE INTERNET NEUTRALITY PROBLEM

A. The Public Forum

There are countries in the world where people still seem to be able to criticize the government in private but where the organs of mass communication have been stilled or restricted. Venezuela, at the moment, seems to be an example. Hugo Chavez has closed down the television station that had been his strongest and most effective critic, and while the station is attempting to transmit via the Internet from Bolivia, it is greatly hampered. This points up a major part of freedom of expression as we know it, the right to speak out in public, in a public forum. Even if a government is not so totalitarian as to prevent you from thinking and speaking against it privately, if you cannot communicate with your fellow citizens, your opinions don’t count for much. One of the great rights that developed out of the English free speech tradition was the right of the individual to speak in public places, what has come to be known as the “Hyde Park Corner.” On the eve of the Second World War, the Supreme Court, under Chief Justice Charles Evans Hughes, decided a series of cases establishing the people’s right to use public streets and parks to speak and to distribute literature, subject only to necessary time, place, and manner restrictions, like not blocking traffic. As a


84. See Christopher Toothaker, Chavez Vows to Pull Plug on TV Foe; Venezuela’s Oldest Private Station Set to Lose License After Years of Poking Fun at the President, TORONTO STAR, Jan. 20, 2007, at A23; see also Radio Caracas Television, http://www.rctv.net/ (last visited Sept. 11, 2007).


86. Cox v. New Hampshire, 312 U.S. 569 (1941); see also Ward v. Rock Against Racism, 491 U.S. 781
result, for nearly seventy years, our society has had an ideal, expressed by Justice Owen Roberts in his concurring opinion in *Hague v. CIO*, that “[w]herever the title of streets and parks may rest, they have immemorially been held in trust for the use of the public and, time out of mind, have been used for purposes of assembly, communicating thoughts between citizens, and discussing public questions.” 87 The driving principle was that the people had not merely a right to think and say what they wished but also a right to communicate it to others, if all else failed, by standing up in the street and simply speaking to whomever would listen.

This was a nice ideal, and often it worked for pamphleteers and speakers from Jehovah’s Witnesses to political candidates standing in busy city shopping districts or in crowded parks trying to convince listeners with their message. 88 But technology interfered. Automobiles, the Interstate Highway System, the rise of the suburbs and, above all, the dominance of giant shopping malls on private property, whose owners could refuse access to “solicitors,” dried up the streets and parks, and case law giving newspapers, radio, and TV stations editorial discretion to refuse access or a right of reply meant that an individual who had a non-mainstream message was unlikely to be heard. Many writers said that the public forum was a romantic ideal that was dead, killed by devotion to a market economy that said that the private sector had no responsibility to aid in the transmission of messages it did not support. 89

B. The Internet and Net Neutrality

But then the Internet came along. Ten years ago, almost none of us knew what it was, and now it dominates our lives. Anyone can get a website for a small fee, and anyone can put up a blog or take part in someone else’s. Technology has given us a public forum massively larger than what we had at the most generous period of access in the past. Not only can anyone post whatever they like, but with search engines, people can gain access relatively easily; they actually read what is posted. Bloggers have become major players, and even if the major media do not choose to carry a story or try to censor it, you can be sure you will be able to find it on the Internet. 90

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88. A generation of New Yorkers remembers Edward I. Koch, long-time Mayor of New York in the 1970s and 1980s, giving out shopping bags in front of Bloomingdale’s and asking, “How’m I doing?”
90. A good example was the coverage of the Danish cartoons that so upset the Islamic world. Because they were deemed offensive to Muslims, the major networks and newspapers talked about the controversy and
But how does the Internet work? I briefly described it in the Introduction.

Connecting the end users (you and me) with content providers (websites Amazon, or Google, a blogger, or an email correspondent) is a massive series of electronic cables, wires, and satellite connections, more complicated than the power grid that brings us our electricity or the telephone system that connects our calls. This infrastructure is owned by private companies, mostly telephone and cable companies, generally called Internet Service Providers (ISPs), and from its outset had been separated in function from the content. The underlying principle was that we had—and wanted—a “stupid Internet.” This made the infrastructure, or network, a common carrier that could not interfere with what went across it, and that was not competing with the content providers, in short, one that was “Internet neutral.” But, again, there was technology. Cable began to play a bigger role in telephony. Cell phones, which had been greatly underestimated when AT&T was broken up, came to affect the Bell domination of local phone service. Even more, Internet content providers began to use the technology described in the Voice over Internet Protocol (VoIP) to compete directly with the long distance service provided by the telephone companies whose lines functioned as the ISP against which they were competing. In addition, the FCC and the courts allowed mergers, for instance between AOL, a giant ISP, and Time Warner, a giant cable company through Time Warner and a giant content provider through Home Box Office (HBO). The lines between content providers and ISPs blurred, and the risk became that ISPs would discriminate against content providers or that content providers would integrate with ISPs, either through mergers or joint ventures, and gang up on smaller, non-integrated competitors. Many content
providers and groups representing end users called for legally enforced net neutrality—more regulation, required transparency, restrictions on vertical integration, and mandatory access to the infrastructure by competitors of the ISPs.

At the same time, the ISPs, libertarians, and many market-oriented economists argued that the ISPs needed to be able to defend themselves against competition, and that tying their hands would restrict progress by forcing the Internet into a pattern decided in the abstract by government regulators who had often been wrong in the past. They argued that an integrated system providing a smooth connection to content provided as part of the system might be cheaper, and more efficient, and that problems of competition were being handled by the multiplication of technologies. Because of changing technology, the issue of Internet concentration was no longer a problem of one telephone company with a natural monopoly but of several telephone companies competing with giant cable companies, satellite companies, and cell phone suppliers. On this reading, as long as end users had a choice of several companies offering to connect them to the ISPs (the so-called “last mile”), problems of competition would be solved. In other words, a government hands-off policy was the best way to achieve net neutrality—by relying on the invisible hand of the market.

I began studying the Internet in the fall of 2006. At that time, there were six bills in Congress. One, sponsored by the influential Texas Congressman Joe Barton, was passed by the House. It would have treated ISPs as cable providers, preempted state or local regulation, and limited the regulation the FCC could impose. Other than requiring ISPs to give VoIPs access to 911 service, it seemed to give the VoIPs no rights as to quality of service or connection. Senator Ted Stevens of Alaska, Chairman of the Senate Commerce, Science and Transportation Committee, submitted a bill that dealt mainly with telephone and cable television service, and dealt with Internet neutrality primarily by doing no more than ordering the FCC to send annual reports to the Science Committee for five years. At the other end, a bill sponsored by the liberal Maine Republican Senator Olympia Snowe and co-sponsored by important Democratic senators including Daniel Inouye, Pat Leahy, Barbara Boxer, Barack Obama, and Hillary Clinton, allowed ISPs to charge end users different prices for different services, but forbade any charges (presumably to content providers) for prioritization of types of messages sent (i.e., email versus music, video or VoIP), as did a bill sponsored by Congressman Sensenbrenner and one sponsored by Senator

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94. The Barton bill did forbid ISPs to require end users to buy any other services from them.
Wyden,\textsuperscript{98} who also was a co-sponsor of Senator Snowe’s bill. Like Senator Wyden’s bill, a bill sponsored by the liberal Massachusetts Congressman Edward Markey\textsuperscript{99} contained a series of findings concerned with concentration of ownership and the limitation on individual freedom of oligopolistic ownership. The Markey bill went further than the others by imposing duties of transparency, access, and disclosure on the ISPs, and seemed to forbid all surcharges for Quality of Service, apparently even those giving consumers a choice of access speeds at different prices. As one who has never been very trusting of the market, I initially favored those providing for heavy regulation, though with the 109th Congress in Republican hands, it was close to certain that none of them would pass, and there was a good chance that one of the anti-regulation bills, either Barton’s or Stevens’s, would.

I gave the talk that led to this article on Election Day, November 6, 2006, the day everything changed. All six of the bills, of course, died with the 109th Congress, and with the Democratic takeover of Congress, the Internet neutrality debate changed. It seemed likely that bills of the type I liked would have a better chance. But the more I have learned about the debate, the less clear the answers seem to me and the shriller some answers now seem. For instance, is it so clear that content providers should be immune from surcharges when their content, like music or videos, requires extra bandwidth, or like VoIP and gaming, are sensitive to “jitter” and can’t afford delays of even a fraction of a second? Is it so clear that companies that have invested billions in building a backbone or a system of wires, switches, and buffers leading to or from the backbone should be required to provide access to competitors at little or no profit to themselves? At the same time, not imposing rules like these will likely allow the ISPs to squeeze smaller competitors out of the market. Senator Daniel Inouye, who succeeded Senator Stevens as Chairman of the Science Committee, had supported Senator Snowe’s Internet Freedom Preservation Act, a highly regulatory bill, but now that he is in charge, he has said that he thinks telecommunications should not be crammed into one massive bill, like Senator Stevens’s bill, but rather should be dealt with in smaller units.\textsuperscript{100} Thus, as the first session of the 110th Congress winds down with no net neutrality legislation, many choices are open.

On top of the specific issues, such as those I mentioned in the last paragraph, we must also give serious thought to how much regulation we want. I am no economic libertarian, and I have no great trust in the invisible hand of the market, but I have become increasingly aware of previous government blunders in the regulation of communications. For instance, the FCC’s doctrinaire insistence on local TV broadcasting produced boring stations with nothing but traffic, car


\textsuperscript{100} David Hatch, Telecom: Strategies for Telecom, Net Neutrality Proposals Emerge, TECH. DAILY, Jan. 23, 2007 (“The Senate Commerce Committee confirmed Tuesday that [Chairman Senator Daniel Inouye] will pursue a series of small, targeted telecommunications bills and not sweeping legislation.”).
crashes, and weather reports and killed any possibility of more than three national networks. The FCC also tried to stop cable for half a generation. Only when the FCC failed did we begin to get programming diversity; ironically, it was cable that made UHF TV, a long-time FCC hobbyhorse, economically feasible, leading additional, largely UHF, broadcast networks like Fox to go with cable innovations like CNN and ESPN. The courts, Congress, the FTC, and the FCC, in breaking up AT&T, misread the coming roles of cell phones and satellites as data transmitters, and then allowed mergers to create a new giant AT&T out of the former Baby Bells.

In April of 2007, the FCC issued a Notice of Inquiry about net neutrality, requesting comments on existing benefits and harms and asking “whether any regulatory intervention is necessary.” 101 Two commissioners thought the notice of inquiry procedure was too timid and that the Commission should have issued at least a Notice of Proposed Rulemaking, given what they saw as clear problems of concentration and discrimination. 102 Two other commissioners expressed skepticism about the need for any new rules, 103 and the Chairman walked a middle ground, emphasizing the need for fact-gathering but saying that “the Commission is ready, willing, and able to step in if necessary.” 104

Predictably, the Bush Justice Department filed an ex parte communication saying that no regulation was needed, the market being a sufficient protector. 105 At the other end, Google has made a public proposal for restrictions on wireless providers’ limitations on the use of their systems. Google has big plans for the wireless market and its proposals would clearly affect Internet access and, I think, give both end users and content providers protection against the existing telephone cable companies that are the dominant ISPs. There are, of course, many other approaches, involving existing or emerging technologies, and if the


voters don’t understand what these possibilities are, we invite technological power brokers to manipulate the Net.

I don’t have a final word on what we should do. I lean, at least, towards great transparency—we must see what is going on inside the Net, be skeptical toward market concentration, and allow access at a fair price for competitors that do not have a system of their own. Whether this requires heavy regulation or Congress and the FCC merely warning the ISPs and content providers that they are watching, I haven’t decided, but it is absolutely clear that the most important protection against destruction of the Internet as a public forum is technical understanding by the general public. We must learn what to do. Unless we learn how the system works and what the often complex and arcane proposals really mean, the Internet will be subject to companies that have an incentive to maximize their profits at the expense of consumers and small content providers, and who can do this in ways that we won’t even recognize as attacks on the public forum concept. We cannot afford to let our ignorance of technological change endanger this great gift to all of us, a gift to enable us to talk and listen to the world without anyone’s permission and despite disapproval by government and big business. It is up to us.