The Future of Free Expression in a Digital Age

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In the Information Age, you would think, there would be no more important part of the Constitution than the First Amendment. After all, free speech guarantees should have a great deal to do with a knowledge economy, and a world in which wealth and power increasingly depend on information technology, intellectual property, and control over information flows.

For some time now, I have been thinking about how our understandings of the First Amendment are likely to change in a digital age. Gradually, I have come to the conclusion that we face a transition of enormous irony. At the very moment that our economic and social lives are increasingly dominated by information technology and information flows, the First Amendment seems increasingly irrelevant to the key free speech battles of the future. Or, more precisely, the judge-made doctrines that I teach in my First Amendment classes seem increasingly irrelevant.

The key values that underlie the First Amendment seem as important as ever: the protection of individual freedom to express ideas, form opinions, create art, and engage in research; the ability of individuals and groups to share their views with others, and build on the ideas of others; and the promotion and dissemination of knowledge and opinion. All these values remain as important in a world of blogs, search engines, and social software as they did in an Enlightenment era dominated by printing presses, pamphlets, and town criers. What has changed, however, is the technological context in which we try to realize these values.

In that context, the most important decisions affecting the future of freedom of speech will not occur in constitutional law; they will be decisions about technological design, legislative and administrative regulations, the formation of new business models, and the collective activities of end-users. We probably could not have achieved the degree of freedom of speech we enjoy in this country without the judicial elaboration of constitutional values.

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in the twentieth century. In the twenty-first century, however, the future of the system of free expression will require other sources of assistance. And in the twenty-first century, the values of freedom of expression will become subsumed under an even larger set of concerns that I call knowledge and information policy. To explain why, I offer a few examples that, at least on the surface, have little to do with the judicial doctrines of the First Amendment, but a great deal to do with freedom of speech.

My first example is the current debate over network neutrality. Today, increasing numbers of Americans access the Internet through network providers, either DSL companies or cable companies. These companies act as conduits for the speech of others. Hence, we depend on them for access to other speakers, just as we depend on traditional telephone service. However, network providers are not currently subject to non-discrimination regulations like the common carriage requirements that apply to traditional telephone service. This creates several possible dangers. First, network providers might want to favor the content and applications of some speakers and businesses over others. They might block access to disfavored sites and services or permit access to end-users only if these sites or services pay a special fee. For example, the Associated Press recently discovered that Comcast had secretly blocked use of a file sharing service called BitTorrent, which is used to move large files across the Internet. Second, many end-users regularly visit certain heavily trafficked sites—like eBay, Google, or sites that use considerable bandwidth. Network providers might seek to charge these sites money to ensure that their traffic flows smoothly to end-users. Third, network providers might want to give a traffic advantage to their content partners or to their own content, reserving a fast track for

7. Id.
8. See van Schewick, Towards an Economic Framework, supra note 3; see also text accompanying note 3.
favored content partners—like movie studios or television networks—who want their streaming media to flow uninterrupted to consumers; conversely, network providers would not protect the flow of content (or even slow down content) from non-partners, competitors, amateurs, and end-users.9

The principle of network neutrality holds that, in general, network providers may not discriminate against content, sites, or applications.10 Putting the principle into practice is more complicated than it might at first appear. One version of a network neutrality rule (there are many) would state that network providers cannot discriminate against content, sites or applications except where necessary to keep the network running properly; however, they may charge their own broadband customers (for example, residential and commercial customers) different prices for different levels of service.11

The goal of network neutrality is to keep digital networks open for many different kinds of content and for many different types of applications and services that people may devise in the future.12 Put another way, the goal of network neutrality is to ensure that the Internet, as much as possible, remains a general purpose data transport system through which many different kinds of content, services, and applications can flow.

What does the debate about network neutrality have to do with the First Amendment? It is worth noting that under current First Amendment doctrine, at least, the Constitution does not require network neutrality. Network providers like Comcast are not state actors. Rather, the decision to

9. See Svensson, supra note 5 (discussing Comcast's practice to slow down traffic involving file-sharing programs).


11. See Rupert, supra note 4; see also text accompanying note 4.

require some form of network neutrality is a regulatory choice that affects how technology is deployed. That choice might be imposed by FCC regulations, or by Congressional legislation, but it is unlikely to flow from a judicial interpretation of the First Amendment. In fact, there is an argument that network neutrality rules actually violate the First Amendment, because they keep network providers from using their communicative property as they like.\textsuperscript{13} However, I do not think this argument succeeds; network neutrality rules treat network providers as conduits for the speech of others and regulate them in their capacity as conduits.\textsuperscript{14} If network neutrality violates the First Amendment, it is hard to see why common carrier obligations for phone companies—which are also treated as conduits for the speech of others—do not violate the First Amendment as well.\textsuperscript{15}

Thus, at least under current doctrine, the First Amendment does not really say much about network neutrality one way or the other. And yet whether network providers can discriminate against content, sites, and applications touches on important free speech values. Vast numbers of Americans now communicate with each other through broadband access, and we can expect that the percentage of communication through these digital networks will only increase over time. Network providers offer an indispensable service to the general public that makes much public (and


\textsuperscript{15. In Turner Broadcasting System v. FCC (Turner I), 512 U.S. 622 (1994), the Court rejected a strict scrutiny standard for “must-carry” obligations for cable operators, arguing that such structural regulations did not intrude on editorial control and should be analyzed according to an intermediate level of scrutiny which was essentially a test of reasonable regulation. \textit{Id.} at 653–62. The Court eventually upheld the regulations under this standard. Turner Broadcasting Sys. v. FCC (Turner II), 520 U.S. 180, 185 (1997). The dissenting Justices would have applied strict scrutiny on the grounds that must-carry rules interfered with editorial decisions, \textit{Turner I}, 512 U.S. at 681–82, but they assumed that treating cable providers as common carriers—who could not discriminate at all with respect to content—would not violate the First Amendment. \textit{Id.} at 681–82, 684 (O’Connor, J., dissenting). Justice O’Connor’s dissenting opinion, joined by Justices Scalia, Ginsburg, and Thomas, argued that “if Congress may demand that telephone companies operate as common carriers, it can ask of cable companies; such an approach would not suffer from the defect of preferring one speaker to another.” \textit{Id.}
private) communication possible. If network providers could discriminate against content and services flowing through their networks, they would be the most powerful censors in America. And because we live in what is effectively a cable-phone duopoly for broadband services, market competition would not necessarily counteract this censorship.

But the debate over network neutrality is about more than whether network providers can discriminate against certain types of content or services. It is likely that in most cases large corporations will not discriminate against communications because of their politics or their moral tone (although there have been well publicized exceptions). Rather, most network discrimination will be for economic reasons—to favor business partners and protect incumbent business models.

Thus, the debate over network neutrality is really about the best way to spur competition and promote innovation. Defenders of network neutrality rules argue that digital networks will generate more useful applications in the future—and thus help people generate and distribute more information—if digital networks remain as neutral as possible between different kinds of content and applications. If you want to promote the growth of new kinds of information services, including services we have not even imagined yet, it is important to keep networks non-discriminatory rather than built to favor the current businesses that network providers are aligned with. While it is true that network providers can be important sources of innovation, they may frown on new kinds of products and services that they did not invent, that they do not provide, and that might threaten their existing ways of doing business. For example, AT&T was uninterested in developing Internet technologies decades ago because doing so would threaten its control of the phone system. A non-discriminatory Internet decentralizes the sources of innovation because everyone can create Internet services and applications without having to obtain permission from broadband companies. People who are not affiliated with broadband companies can come up with the next

16. Note that content industries might also press the state to require that network providers install filters to track and forestall copyright violations.
19. See id. at 31–33.
20. See id. at 138.
eBay, Google, Blogger, YouTube, Flickr, or Facebook. None of these applications, as far as I am aware, originated with a broadband company.

This is all very well and good, you might say, but what does it have to do with the First Amendment? Why should promoting innovation matter to people who care about freedom of speech? A system of free speech depends not only on the mere absence of state censorship, but also on an infrastructure of free expression. The infrastructure of free expression includes the kinds of media and institutions for knowledge, creation, and dissemination that are available at any point in time. It also concerns the kinds of opportunities that are available for people to create and build technologies and institutions that other people can use for communication and association. Two contemporary examples are Internet telephony and file-sharing services like BitTorrent. These new applications—which allow people to communicate and trade information and files cheaply—were possible because entrepreneurs could lay new applications on top of Internet protocols. People could create these new applications because the structure of the Internet allowed this sort of experimentation without getting anyone else’s permission in advance. By choosing a regulatory scheme that lets the Internet function more or less as a general data transport system, we open up possibilities for a wide variety of new applications and services that can let people share information and opinions, build things together, and form online communities.

Consider, for example, the wide variety of social software sites that have sprung up on the Internet in the past decade. These include Web 2.0 sites like Facebook and Flickr. Such sites perform several different functions simultaneously. They are hosting sites for multimedia content (Flickr hosts photographs, for example, and Facebook hosts a variety of different media), but they are also online community platforms that allow people to communicate with each other and pursue common interests and activities through online media. Policies that facilitate this kind of innovation—and that allow many people, not just network providers, to engage in it—better serve the interests of freedom of speech in the long run, even though such innovation policies do not, at least on their face, seem to be about government censorship.

To be sure, advocates of network neutrality have often made their case before the public by talking about the dangers of network censorship. That

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is easier for people steeped in our First Amendment traditions to understand. Yet the larger question in the debate over network neutrality is innovation policy. That question has enormous implications for media access and for future opportunities to speak, listen, share information, and associate with others.  

My second example is the issue of intermediary liability, and, in particular the privilege created by section 230(c)(1) of the Telecommunications Act of 1996. Most students, I would bet, probably do not hear much about section 230 in their First Amendment classes, but it has been one of the most important guarantors of free expression on the Internet, at least in the United States. Section 230(c)(1) says that "[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider." In other words, people who deliver Internet traffic, like broadband companies, cannot be held liable for the traffic that flows through their networks. Even more important, people who operate websites or online services on which other people provide content, like chat rooms, blogging services, website hosting services, search engines, bulletin boards, or social networking sites like Facebook and Myspace, cannot be held liable for what other people say when others use these networks, services, or sites. If people write comments in response to a posting on my blog, I am not liable for their speech; Blogger, who hosts my blog, is not liable for what I write on my blog; Google, the search engine company, is not liable for search engine results that quote or link to what I said, and so on. This privilege applies to a wide range of different communications torts and crimes but not to alleged infringements of intellectual property rights.

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23. Brett Frischmann has made related arguments using the language of spillover effects. See Brett M. Frischmann & Mark A. Lemley, Spillovers, 107 COLUM. L. REV. 257, 297 (2007) ("Common nondiscriminatory access to the Internet infrastructure facilitates widespread end-user participation in a variety of socially valuable productive activities."); Brett M. Frischmann, An Economic Theory of Infrastructure and Commons Management, 89 MINN. L. REV. 917, 1017-18 (2005) (emphasizing spillover effects of noncommercial activity); see also Benkler, supra note 21, at 26 (arguing that construction of a "core common infrastructure . . . serves the central values that animate the First Amendment").


25. § 230(c)(1).

26. See, e.g., Zeran v. Am. Online, Inc., 129 F.3d 327 (4th Cir. 1997) (finding AOL not liable for defamatory statements published by one of its users); see also Doe v. GTE Corp., 347 F.3d 655 (7th Cir. 2003) (holding GTE not liable after a user of one of its websites posted illegal videos of athletes changing in their locker room).

27. In these cases, the safe harbor provisions of the Digital Millennium Copyright Act apply; in
Section 230 is a rule of intermediary liability. It gives Internet intermediaries like network providers and online service providers a privilege against certain lawsuits based on content provided by third parties. It is not required by First Amendment doctrine. Yet it has had enormous consequences for securing the vibrant culture of freedom of expression we have on the Internet today. The reason is that section 230 has protected the conduits and online service providers from being sued for the speech of strangers that they carry. Because online service providers are insulated from liability, they have built a wide range of different applications and services that allow people to speak to each other and make things together. Section 230 is by no means a perfect piece of legislation; it may be overprotective in some respects and underprotective in others. But it has been valuable nevertheless.

Often it is very difficult to locate and sue people for their speech on the Internet. Much speech on the Internet is anonymous, it may be difficult to locate the person who is speaking, or the person may be overseas. If plaintiffs are upset by what somebody says online, it is far easier to sue the online service provider who let them publish the speech on their site, or the network provider who let the traffic through. Not only are these entities likely to have deeper pockets, they are also probably easier to find.

28. The closest analogy is Smith v. California, 361 U.S. 147 (1959). In Smith, the Court struck down a California statute that made it a crime for bookstore owners to stock books that were later judicially determined to be obscene, even if the owner did not know of the books' contents. The Supreme Court held the statute unconstitutional, arguing that “if the bookseller is criminally liable without knowledge of the contents ... he will tend to restrict the books he sells to those he has inspected; and thus the State will have imposed a restriction upon the distribution of constitutionally protected as well as obscene literature.” Id. at 153. There is also a similarity between section 230 and the common law distributor's privilege. See Restatement (Second) of Torts § 581 (“[O]ne who... delivers or transmits defamatory matter published by a third person is subject to liability if, but only if, he knows or has reason to know of its defamatory character.”). However, section 230 prevents liability even if the computer service provider knows of the content in question. See, e.g., Blumenthal v. Drudge, 992 F. Supp. 44, 52 (D.D.C. 1998). The Digital Millennium Copyright Act, by contrast, imposes a notice and takedown system. See 17 U.S.C. § 512(c)(1)(A)(iii) (2004).

29. See 47 U.S.C. § 230(b)(2) (stating that the policy of the United States is “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services”).

30. See § 230(c)(1).

31. Section 230(2), for example, gives conduit owners complete discretion to censor traffic in addition to the section 230(1) immunity.


33. See Scot Wilson, Corporate Criticism on the Internet: The Fine Line Between Anonymous Speech and Cybersmear, 29 Pepp. L. Rev. 533, 555 (2002) (arguing that section 230 “has largely foreclosed access to these deep-pocket defendants”).
Equally important, intermediary liability produces a phenomenon called "collateral censorship": Threats of liability against party A (the conduit or online service provider) give them reasons to try to control or block the speech of party B (the online speaker). Some times it is perfectly sensible to hold people liable for other people's speech. The print version of the New York Times may be liable for the speech of other people that it publishes, including that of its reporters, columnists, and even its advertisers. In fact, the famous case of New York Times v. Sullivan involved an advertisement that was the basis of Police Commissioner Sullivan's libel suit. Similarly, book publishers are liable for the statements of authors they print.

Network providers and online service providers, however, do not operate the same way as newspapers and book publishers. Large numbers of strangers send traffic through ISPs and large numbers of people will make use of various online services. For example, Google's search engine takes snippets of people's sites from around the world and provides links to them. Google also owns Blogger, which provides a blogging platform that anyone can sign up for and use. And on each of these blogs, the blogger can allow third parties to write comments to the blog posts. To return to the example of the New York Times, the online version, NYT.com (as opposed to the "dead tree" version), hosts a number of different blogs and interactive features that allow subscribers to respond to the editors and commentators by posting their own thoughts and ideas.

The problem with the strategy of collateral censorship in the Internet context is that it simultaneously leads to too much censorship and too little

35. See Cantrell v. Forest City Publ'g Co., 419 U.S. 245, 253-54 (1974) (approving jury charge which permitted the imposition of vicarious liability upon a publisher for the knowing falsehoods written by its staff writer).
38. See Batzel v. Smith, 333 F.3d 1018, 1026 (9th Cir. 2003) ("Congress decided not to treat providers of interactive computer services like other information providers such as newspapers, magazines or television and radio stations, all of which may be held liable for publishing or distributing obscene or defamatory material written or prepared by others." (quoting Blumenthal, 992 F. Supp. at 49)).
innovation. Book publishers have a vested interest in the work of their authors, and newspapers have a vested interest in the work of their journalists. But if A is not affiliated with B, A lacks strong incentives to defend B's speech and every incentive to prevent lawsuits. As a result, to avoid liability, A will tend to censor a lot. Indeed, A may not allow anything that A has not written, created, or heavily edited to be posted. If I were liable for comments posted in response to my blog posts, I simply would not allow any comments. The same is true for online versions of newspapers and magazines which now allow readers to respond by posting comments. Without section 230, many website operators would simply disable these features. While liability might give incentives for wealthy online service providers to develop filtering mechanisms to weed out potentially actionable speech, the more likely result would be shutting down applications and services that a wide range of people can use.\(^40\)

But beyond the problem of collateral censorship, there is also the question of incentives for innovation in creating new forms of information services and online media. Recall the many different examples of social software I mentioned earlier. If I am considering creating an online service that allows people to post things or publish them on my server or website, I will probably think twice if I could be sued for whatever is posted or uploaded. Without something like the section 230 immunity, it would be very risky to create social software that allows others to blog or publish, much less create a social networking site. Indeed, search engine companies like Google, which publish snippets of other people's sites to help you find them, or advertising sites like Craigslist, which act as community bulletin boards,\(^41\) would be in serious jeopardy, not to mention sites like Amazon.com which encourage customer reviews and commentary.\(^42\) The wide range of participatory media and applications that characterize the Internet today would be at continuous risk of lawsuits. As a result, much of the Internet's freedom and many of its manifold possibilities for communication and association would be chilled.

Let me step back now and consider a few things about these two examples. First, in describing the free speech values implicated by digital technologies, I have repeatedly emphasized the importance of participation by a large number of different people. What makes the Internet so vibrant and so special is precisely that many different people get to communicate—not just people who own or work for large, mass media organizations. That

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40. See Zeran v. Am. Online, Inc., 129 F.3d 327, 331 (4th Cir. 1997) (arguing that interactive computer service providers would restrict content if faced with liability for republished messages).
is also what makes the Internet so full of content and discussions on every possible topic. By greatly lowering the costs of content transmission and distribution, and by providing a general purpose data transport, storage, and publication system, the Internet has effectively harnessed the world's interests, creativity, and intelligence to produce an enormous archive of, well, everything.

Second, once you open up media to large numbers of people, and create online communities, some of the speech will be about politics and public issues, but a far larger share will be about things that people care about outside of politics, like popular culture, art, music, movies, books and novels, gossip, and even pictures of their friends or their pets. Although the blogosphere hosts a vibrant sphere of political discussion, most blogs are not about politics—they are personal journals that talk about a wide variety of topics. Similarly, although people have used social networking sites for political organization to great effect, social networking sites are far more frequently used for—you guessed it—social networking.

Third, I have offered two examples where free speech values get protected not through judicial elaboration of constitutional precedents, but through regulatory and technical decisions. This is no accident. What makes the Internet so valuable to freedom of speech is its openness of design and the many different kinds of things you can do with it because of that openness. But this is not simply a story about technology. Law plays an important role in creating incentives for technologies to be built in one way rather than another, thus facilitating certain types of business models and public participation. The Internet's largely open networks and legal rules, like section 230, have helped ensure a remarkably diverse ecology of applications, services, and content. Nevertheless, the most important decisions will not be made by courts construing the Constitution; they will be made by legislatures, administrative agencies, technologists, entrepreneurs, and end-users.

Fourth, in both of my examples the traditional concern of the First Amendment—censorship—remains a problem. However, the censorship is as likely to come from private entities that control telecommunications networks and online services as from the government. Moreover, concerns about network censorship are actually part of a larger set of issues: the deep

43. See Amanda Lenhart & Susannah Fox, Bloggers: A Portrait of the Internet's New Storytellers, PEW INTERNET AND AMERICAN LIFE PROJECT, July 19, 2006, http://www.pewinternet.org/pdfs/PIP%20Bloggers%20Report%20July%202006.pdf (noting that "while many well-publicized blogs focus on politics, the most popular topic among bloggers is their life and experiences").
connection between free speech values and innovation policy. In the examples of network neutrality and intermediary liability, we cannot easily separate values of free expression from the goals of promoting widespread and decentralized innovation and new forms of information production and information services. To put it another way, we best serve free speech values by decentralizing and promoting innovation, by letting lots of different people experiment with a wide variety of new ways of communicating, sharing information, associating, and building things together.

This brings me back to my central point: The rise of digital networks as a dominant technology for speech in our age transforms the way we should think about the First Amendment and the principles of freedom of expression.

First, the digital age makes increasingly clear that the point of the free speech principle is to promote not merely democracy, but something larger: a democratic culture. What is a democratic culture? It is a culture in which ordinary people can participate, both collectively and individually, in the creation and elaboration of cultural meanings that constitute them as individuals. Participation in culture is important to us as human beings because, in an important sense, we are made out of culture; we draw on culture to be the sort of individuals we are. We inhabit, reproduce, and reconstruct culture by living in it, using it, adding to it, building on it, and altering it through our use of it. A democratic culture is not democratic because people get to vote on what culture should be like. It is democratic because people get to participate in the production of culture through mutual communication and mutual influence. Democratic culture invokes a participatory idea of democracy.

The idea of a democratic culture includes the idea of participation in representative self-government, but it is far more than that because the realm of culture is larger than the realm of representative self-government. Indeed, a theory of freedom of speech justified in terms of its potential contributions to representative self-government seems altogether too narrow in the age of the Internet. Digital networks do far more than provide information necessary for democracy in a nation state. First, what people do on the Internet transcends the nation state; they participate in discussions, debate, and collective activity that does not respect national borders. These are valuable human activities in their own right; they should not be protected only because and to the degree that they might contribute to debate about

44. Balkin, Digital Speech, supra note 21, at 3–6, 33–50.
45. Id. at 3–4.
46. Id. at 4–5.
American politics, or even American foreign policy.\textsuperscript{47} Second, as I noted above, the vast majority of Internet speech has little to do with issues of public concern, but it has a great deal to do with popular culture, with popular mores, and with the everyday concerns of people's lives.\textsuperscript{48}

Long before the rise of the Internet, the twentieth century witnessed a great technological advance in communications technology. This was the development of broadcast mass media: radio, television, movies, cable, and satellite transmission. At the same time, newspapers became increasingly concentrated in the hands of a relatively few owners. The result was that only a relatively small number of people had the ability to speak using the most powerful communications media of their time. The social organization of speech and the media environment in which speech occurred created an enormous tension in twentieth century free speech theory. Just when courts began protecting the formal right of all Americans to speak, the practical reality was that citizens were not able to communicate and influence others on an equal footing. The most powerful voices were relatively few in number, and the degree of practical inequality accelerated as the century proceeded.\textsuperscript{49} Not only was the ownership of mass media limited, but the media themselves were unidirectional: The speaker spoke and the audience listened, with very few opportunities to talk back. People could listen and receive information but not be broadcasters themselves.

Many free speech theorists during the twentieth century decided to make a virtue out of what they regarded as necessity. Following Alexander Meiklejohn, they argued that the entire purpose of freedom of speech was to provide information necessary for democratic self-government and deliberation about issues of public concern in a large republic like the United States.\textsuperscript{50} Thus, Meiklejohn and his followers argued that the point of freedom of speech was not securing individual autonomy; rather, it was to ensure that the public was well-informed that they could address the key public issues of the day and vote for people to represent them.\textsuperscript{51} This

\textsuperscript{47} Id. at 32.
\textsuperscript{48} Id. at 12.
\textsuperscript{49} See Jerome A. Barron, Access to the Press—A New First Amendment Right, 80 HARV. L. REV. 1641 (1967); Owen M. Fiss, Free Speech and Social Structure, 71 IOWA L. REV. 1405 (1986) [hereinafter Fiss, Free Speech].
\textsuperscript{51} MEIKLEJOHN, supra note 50, at 24–27.
twentieth century vision, influenced by twentieth century mass media, willingly sacrificed the values of autonomy and creative participation on behalf of the goals of informing the public and setting an appropriate public agenda.  

Meiklejohn put it best in his dictum that what is important in a system of free expression is not that everyone gets to speak but that “everything worth saying shall be said.”

This vision, however well adapted to the media environment of the twentieth century, seems greatly impoverished in the twenty-first. Broadcast mass media will no doubt remain an important feature of our public life for many years to come. But we need a free speech theory that recognizes that technological changes have made it possible for large numbers of people to broadcast and publish to audiences around the world, to be speakers as well as audiences, to be active producers of information content, not just recipients or consumers.

When large numbers of people use these technologies to speak, they will set their own agendas and express their own concerns, which may be personal and cultural, or may transcend the nation state. In this way, the digital technologies of the twenty-first century make salient aspects of speech that were always present to some degree. Digital speech, like speech generally, ranges over the whole of culture; only some of it is connected to politics, the central concern of democratic deliberation theories. Digital speech, like speech generally, is interactive; people talk back to each other constantly. They participate in virtual communities, and they use these communities to build things together. Finally, digital speech, like speech generally, is opportunistic and appropriative. People take culture as they find it and build on what others have done; they glom onto the work of the mass media and the work of other individuals, criticizing, objecting, parodying, improving, and synthesizing. They make mashups; they create bricolage; they simplify; they elaborate. They make the new out of the old; they copy, pilfer, and repeat, and by repeating, they alter.

The great tension in twentieth century free speech theory was the increasing protection of the formal freedom to speak against the background of technologies of mass broadcast that reserved practical freedom for a

53. MEIKLEJOHN, supra note 50, at 26, 55 (The First Amendment “has no concern about the ‘needs of many men to express their opinions’” but rather is concerned with “the common needs of all the members of the body politic.”).
55. Id. at 34.
56. Id. at 32.
57. Id. at 46–48.
The tension in twenty-first century free speech theory will be slightly different. New technologies offer ordinary citizens a vast range of new opportunities to speak, create and publish; they decentralize control over culture, over information production and over access to mass audiences. But these same technologies also make information and culture increasingly valuable commodities that can be bought and sold and exported to markets around the world. These two effects—participation and propertization—are produced by the same set of technological advances; they have and will repeatedly come into conflict with each other, as technologies that create new possibilities for democratic cultural participation threaten business models that seek to commodify knowledge and control its access and distribution. Intellectual property and telecommunications law are the terrain on which this struggle will occur, but what is at stake is the practical structure of freedom of speech in the new century.

This brings me to my final point about the transformation of freedom of speech in the digital age. Protecting free speech values in the digital age will be less and less a problem of constitutional law—although these protections will remain quite important—and more and more a problem of technology and administrative regulation. The two issues I began with, network neutrality and limits on intermediary liability, exemplify this transition. Neither issue is, strictly speaking, an issue of judge-made First Amendment doctrine, and yet both affect the structure of media access and the nature of free expression on the Internet.

In *Reno v. ACLU*, the Supreme Court noted—and hailed—the Internet’s manifold possibilities for free expression. But the Internet is not a Supreme Court decision; it is a set of technologies that were designed in a certain way and that are subject to various forms of regulation. Digital technologies, like the Internet itself, do not have to be structured in any particular way. We can design them so that they promote participation and innovation by large numbers of people. Or we can design them so that they are far less participatory, so that the Internet becomes a locked-down content delivery system designed for large enterprises, like broadcast and cable television are today. Cell phones, which remain a largely closed system, for example, could become a new platform for decentralized technological innovation, or they might never become open in the way that the Internet has

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58. *Id.* at 16, 43.
59. *Id.* at 3, 16.
been. Technological design, aided and abetted by intellectual property and telecommunications law, can foster relatively closed, proprietary architectures and standards, or relatively open, easily adoptable ones.\textsuperscript{61} The Internet can become a special purpose data transport system like cable television or traditional phone service, or it can remain a general purpose system for moving information that allows lots of different business models and experiments with new services and applications. These decisions have real consequences for the system of freedom of expression. Free speech values increasingly depend on policies that promote innovation and keep incumbent businesses from blocking new ideas, services, and applications. They depend on regulatory decisions that keep the Internet open, either by limiting liability (as in the case of section 230) or by discouraging anticompetitive behavior (as in the case of network neutrality rules).

An increasing number of the issues and controversies that most seriously impact free speech values, I predict, will be technical and regulatory questions like these, rather than questions of judge-made First Amendment doctrine. That is because courts are not institutionally well suited to address these issues through constitutional law. Although courts will be called upon to interpret statutes and administrative regulations, they cannot design technology themselves or order it to be designed in particular ways.

This does not mean that constitutional litigation in these areas will cease. But often it will have a very different purpose. Network providers, broadcasters and cable companies will, as they have in the past, invoke First Amendment arguments to resist government regulation, and to protect incumbent business models. First Amendment challenges to media concentration rules are one example. Or consider the argument noted earlier that network neutrality rules, far from being required by freedom of speech, actually violate the First Amendment because they interfere with network providers' control over their communications technology. This would insert constitutional doctrine into network design in a particularly inflexible and unhelpful way. If courts misconstrue the First Amendment this way, they will not promote free speech values; they will create obstacles to their realization.\textsuperscript{62}


Free speech values, I predict, will increasingly meld with a larger set of concerns about how best to produce knowledge and promote innovation in information technologies and services. Eventually we will come to see free speech values as part of a larger set of concerns that I call knowledge and information policy. Indeed, we will eventually come to see First Amendment law—as judges have constructed it in the twentieth century—as an important subset of knowledge and information policy. Free speech doctrines are surely one method for promoting the growth of knowledge in society and individual freedom in a world increasingly dominated by information technology. But they are not the only means, and in some respects they are very limited indeed.

What are the goals of knowledge and information policy? They include:

- Promoting the production and dissemination of valuable information;
- developing a healthy and vibrant public sphere of knowledge and opinion;
- ensuring that knowledge production and opinion formation come from a broad, diverse, and antagonistic set of sources;
- encouraging widespread participation in knowledge production and dissemination;
- developing human capacities through securing widespread access to knowledge and information technology;
- protecting and fostering institutions devoted to knowledge production and opinion formation; and
- promoting innovation in knowledge and information production and dissemination.

Although I have stated these goals abstractly, it is easy to see how they intersect with the concerns of judge-made First Amendment law, but also go beyond them. To give only one example, intellectual property law is deeply concerned with creating incentives for knowledge production and dissemination, but it is not the same thing as First Amendment law. Similarly, the goal of promoting innovation in knowledge production and information technology overlaps with, but is not identical to, free speech values.

In the digital age, judicial protection of First Amendment rights will remain quite important; but if I am correct about the trajectory of future policy debates, our attention will increasingly shift to questions of design—

both of institutions and technology—that are largely beyond judicial competence. The key players in ensuring free speech values in the digital age will be legislatures, administrative agencies, and technologists.

Indeed, one might summarize many aspects of knowledge and information policy in our Constitution’s original grant of power to Congress to “promote the progress of science and useful arts.”64 (In 1787 the word “science” referred to any organized body of knowledge or learning, including the study of classics or literature, and the “useful arts” corresponded more closely to what we would call engineering or technology.)65 It is also worth noting that the Constitution gives this power to promote progress not to the judiciary, but to the legislative branch. To be sure, the Progress Clause specifies a way to achieve these goals—creating intellectual property—but there is little doubt these days that Congress may encourage the growth and spread of knowledge through other means as well, including grants for scientific research, educational support, postal subsidies, and the creation of libraries.

These days, we should read the Progress Clause in concert with the First Amendment; together they set forth an interlocking set of goals and values: to protect the development of knowledge and opinion through securing the freedom of speech, press, petition and assembly, and through policies designed to promote the growth of—and access to—knowledge. The two clauses come from the eighteenth century. But their combination makes increasing sense in the twenty-first.

64. U.S. CONST. art. 1, § 8, cl. 8.