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## From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access

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# From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access

Yochai Benkler\*

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## I. INTRODUCTION

Constructing our information environment as one composed of information “from diverse and antagonistic sources”<sup>1</sup> has been a central focus of structural regulation and its First Amendment justification for half a century. In the twentieth century, structural media regulation meant

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1. *Associated Press v. United States*, 326 U.S. 1, 20 (1945).

tinkering with the configuration of a mass media market aimed at eyeballs. For example, group ownership and duopoly rules, licensing criteria like diversity and localism, financial interest and syndication rules, or cable access rules, took the basic structure of mass media markets as given, and tried to make sure that this basic structure delivered somewhat more diverse content than it would if left to its own devices. Technology now makes possible the attainment of decentralization and democratization by enabling small groups of constituents and individuals to become *users*—participants in the production of their information environment—rather than by lightly regulating concentrated commercial mass media to make them better serve individuals conceived as passive consumers. Structural media regulation in the twenty-first century must, in turn, focus on enabling a wide distribution of the capacity to produce and disseminate information as a more effective and normatively attractive approach to serve the goals that have traditionally animated structural media regulation.

As the digitally networked environment matures, regulatory choices abound that implicate whether the network will be one of peer users or one of active producers who serve a menu of prepackaged information goods to consumers whose role is limited to selecting from this menu. These choices occur at all levels of the information environment: the physical infrastructure layer—wires, cable, radio frequency spectrum—the logical infrastructure layer—software—and the content layer. At the physical infrastructure level, we are seeing it in such decisions as the digital TV orders (*DTV Orders*), or the question of open access to cable broadband services, and the stunted availability of license-free spectrum. At the logical layer, we see laws like the Digital Millennium Copyright Act (DMCA)<sup>2</sup> and the technology control litigation that has followed hard upon its heels, as owners of copyrighted works attempt to lock up the software layer so as to permit them to control all valuable uses of their works.<sup>3</sup> At the content layer, we have seen an enclosure movement aimed at enabling information vendors to capture all the downstream value of their information. This enclosure raises the costs of becoming a user—rather than a consumer—of information and undermines the possibility of

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2. See Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified in scattered sections of 17 U.S.C.A.).

3. See, e.g., *Recording Industry Ass'n of Am. v. Diamond Multimedia Sys. Inc.*, 180 F.3d 1072 (9th Cir. 1999) (permitting manufacture and sales of Rio, a portable MP3 player, against recording industry challenge); *Universal City Studios, Inc. v. Reimerdes*, No. 00 Civ. 0277 (LAK) (S.D.N.Y. Feb. 2, 2000), available at (Mar. 19, 2000) <<http://www.nysd.uscourts.gov/courtweb/pdf/00-01149.PDF>>; *DVD Copy Control Ass'n, Inc. v. McLaughlin*, No. CV 786804 (Cal. Super. Ct. Jan. 20, 2000), available at (Mar. 19, 2000) <[http://www.eff.org/ip/Video/DVDCCA\\_case/20000120-pi-order.html](http://www.eff.org/ip/Video/DVDCCA_case/20000120-pi-order.html)> (facing similar issues framed under California trade secret law).

becoming a producer/user of information for reasons other than profit, by means other than sales.

At all these levels, the fundamental commitment of our democracy to secure “the widest possible dissemination of information from diverse and antagonistic sources,”<sup>4</sup> which has traditionally animated structural media regulation, should be on securing a significant component of the information environment for creative use by users. To implement such an agenda would require a focus on identifying resources necessary for the production and exchange of information and fashioning regulatory policies that make access to and use of these resources equally and ubiquitously available to all users of the network. Developing a series of commons in such resources is an important mode of implementation of this commitment. Other modes could include access and carriage requirements aimed specifically at making possible the development of a network of peer users. Identifying and sustaining commons and securing access to communicative resources are more important focuses for information policy concerned with democracy than assuring that there are eight rather than three broadcast networks or that no two networks are under common ownership.

## II. AT THE CROSSROADS

The basic structure of mass media markets emerged in the middle of the nineteenth century. Harold Innis<sup>5</sup> and James Beniger<sup>6</sup> have described how the development of high volume, high cost mechanized printing presses and the telegraph changed the enterprise of the press from a local, small circulation medium for political and public discourse to a mass scale demand management system.<sup>7</sup> As Innis put it, journalists became people who write on the back of advertisements.<sup>8</sup> After the introduction of broadcast, a series of business and regulatory decisions channeled this new

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4. *Associated Press*, 326 U.S. at 20; *see also* *Turner Brdcast. Sys., Inc. v. FCC*, 520 U.S. 180 (1997); *Turner Brdcast. Sys., Inc. v. FCC*, 512 U.S. 622 (1994); *Buckley v. Valeo*, 424 U.S. 1, 48-49 (1976); *Citizen Publ'g Co. v. United States*, 394 U.S. 131, 139-40 (1969); *Red Lion Brdcast. Co. v. FCC*, 395 U.S. 367 (1969); *New York Times v. Sullivan*, 376 U.S. 254, 266 (1964).

5. HAROLD INNIS, *THE BIAS OF COMMUNICATION* (1951).

6. JAMES R. BENIGER, *THE CONTROL REVOLUTION: TECHNOLOGICAL AND ECONOMIC ORIGINS OF THE INFORMATION SOCIETY* (1986).

7. Beniger is the one who explained most usefully how advertising in mass media was introduced to solve the growing gap between the tremendous growth of productivity in the nineteenth century and the lagging changes in demand patterns. *See also* ITHIEL DE SOLA POOL, *TECHNOLOGIES OF FREEDOM* (1984) (describing rise of mass media).

8. *See* INNIS, *supra* note 5, at 186.

medium into the same model,<sup>9</sup> and by the late 1920s, the basic structure of our mass mediated environment was in place.<sup>10</sup> This structure relies largely on a small number of professional, commercial producers seeking to serve the widest possible audiences. As Baker showed quite comprehensively,<sup>11</sup> they do so by providing information and cultural products that have relatively wide appeal and gloss over, rather than tend to, the diversity of actual interests and needs of finer divisions within the body of the mass audience. Nothing captures this better than the metaphor of the market for eyeballs. This basic structure will remain unaffected as long as we continue to think of our information and communications policy purely in terms of securing better service to consumers.

There is an alternative. The Internet graphically represents this for us, at least as it was in the 1990s. In this information environment, the end points are users—an ambiguous category from the perspective of an established conception of an information environment composed of (a small number of professional) producers and (a large number of passive) consumers. Users sometimes receive information and sometimes rework it and send it to others. They can play the roles of producer and consumer. Their acts of reception are dialogic in the sense that they can easily be mapped as moves in a conversation rather than as endpoints for the delivery of a product.<sup>12</sup>

This alternative is neither utopian nor preordained. It is possible to have a system that breaks through the clear cut categories of producer and consumer. For decades, individuals have been willing to pay much more for the privilege of participating in conversations than to receive professional content—expenditures on long-distance and local telephones have been greater than expenditures on newspapers, magazines, broadcast, cable, and movies put together.<sup>13</sup> A combination of technology, business

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9. See GLEASON L. ARCHER, *HISTORY OF RADIO TO 1926* (1938); ERIK BARNOUW, *A TOWER IN BABEL: A HISTORY OF BROADCASTING IN THE UNITED STATES* (1966); BENIGER, *supra* note 6, 362-70; PHILIP T. ROSEN, *THE MODERN STENTORS: RADIO BROADCASTERS AND THE FEDERAL GOVERNMENT, 1920-1934* (1980).

10. See Yochai Benkler, *Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment*, 11 *HARV. J. L. & TECH.* 287, 299-318 (1998).

11. See C. Edwin Baker, *Giving the Audience What It Wants*, 58 *OHIO ST. L.J.* 311 (1997).

12. I have provided a more detailed breakdown of the differences between the broadcast model of communication and the internet model in Yochai Benkler, *Communications Infrastructure Regulation and the Distribution of Control over Content*, 22 *TELECOMMS. POL'Y* 183 (1998).

13. That these prices were inflated by monopolies does nothing to undermine the conclusion that people were willing to spend much more on speaking than on receiving mass-marketed content.

organization, and law prevented the emergence of a widely decentralized information environment where production and consumption are less starkly separated.<sup>14</sup>

Today, as the Internet and the digitally networked environment present us with a new set of regulatory choices, it is important to set our eyes on the right prize. That prize is not the Great Shopping Mall in Cyberspace. That prize is the Great Agora—the unmediated conversation of the many with the many.

### III. WHY USERS?

#### DEMOCRACY, PERSONAL AUTONOMY, AND COMMUNICATION

In a series of cases in which the Supreme Court reviewed various media regulations, the Court has steadily developed an understanding that decentralization of information production is a policy that serves values central to the First Amendment.<sup>15</sup> Most pithily captured in Justice Black's statement in *United States v. Associated Press*,<sup>16</sup> since adopted in other cases in this line—*Red Lion* and the two *Turner* cases—it is central to the values served by the First Amendment that we secure "the widest possible dissemination of information from diverse and antagonistic sources."<sup>17</sup>

These cases represent a central problem of modern First Amendment law. First identified in 1947 by Zechariah Chafee<sup>18</sup> and the Commission on Freedom of the Press (Commission) that he vice-chaired,<sup>19</sup> the problem arises from the technological and economic fact that different people and organizations in society have very different power to affect the flow of information in society. In particular, the owners of mass media outlets have an unusual degree of control over who gets to say what in the public arena. The problem arises when government intervenes to regulate media outlets with the specific intent of serving the values underlying the First Amendment—robust debate, diversity of viewpoints, and individual expressive freedom. The hope for such regulation is that it will in fact implement these core values. The fear, of which Chafee and the Commission writing at the dawn of the second red scare were well aware,

14. See Benkler, *supra* note 12; Benkler, *supra* note 10, at 299-318.

15. For a more complete review of these cases and my conclusions from them, see Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 366-86 (1999).

16. 326 U.S. 1 (1945).

17. *Id.* at 20.

18. See ZECARIAH CHAFEE, JR., *GOVERNMENT AND MASS COMMUNICATIONS* 471-719 (1947).

19. THE COMMISSION ON FREEDOM OF THE PRESS, *A FREE AND RESPONSIBLE PRESS* 1-12 (1947).

was not only, or even primarily, that regulators would do a poor job and discourage as much as encourage valuable speech.<sup>20</sup> The problem is that government might use its power to suppress speech it disagrees with under the guise of regulating to enhance freedom of speech, and that government would get too comfortable with the idea of regulating communications markets and regulate well beyond what is necessary to assure robust, open discourse.<sup>21</sup>

The problem of how to reconcile the fear of government intervention with the reality of a tightly controlled media industry that provides relatively little diversity and less access to most of society's constituents has since been taken up by others. Jerome Barron's work on access rights was the high water mark of the direct translation of these insights into a claim for constitutionally based access rights to the means of public discourse.<sup>22</sup> It largely broke on the shoals of *Miami Herald Publishing Co. v. Tornillo*.<sup>23</sup> Since then, Baker,<sup>24</sup> Fiss,<sup>25</sup> and Sunstein<sup>26</sup> have developed extensive and sophisticated justifications for the adoption of speech-enhancing policies.

It is all too simple and misleading to ignore the centrality of the electronic media regulation cases to our understanding of the values we ought to pursue in our information and communications policy. We have the imperious tone of *Miami Herald* to sooth us into believing that it, rather than these aberrant cases, is the norm adopted by the First Amendment, and they are the deviant. The media regulation cases themselves rely on technology, special market conditions, or newness of the technology to justify their positions. But at the end of the day, we are left with a remarkable and robust state of affairs. "Special" regulatory regimes that look more leniently on carriage regulation or access requirements than the supposedly normal case, which has come to apply primarily to the printed page, cover all electronic carriage media—wireless, coaxial cable, twisted pair, or other telecommunications media.

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20. See CHAFEE, *supra* note 18, at 475-76.

21. See *id.* at 476-77.

22. See JEROME BARRON, FREEDOM OF THE PRESS FOR WHOM? THE RIGHT OF ACCESS TO MASS MEDIA (1973); Jerome Barron, *Access to the Press—A First Amendment Right?*, 80 HARV. L. REV. 1641 (1967).

23. 418 U.S. 241 (1974).

24. See C. Edwin Baker, *The Media that Citizens Need*, 147 U. PA. L. REV. 317 (1998); Baker, *supra* note 11, at 322-44.

25. See Owen M. Fiss, *Why the State?*, 100 HARV. L. REV. 781 (1987).

26. See CASS R. SUNSTEIN, DEMOCRACY AND THE PROBLEM OF FREE SPEECH (1993).

The basic commitment that explains this “anomaly” is most plainly stated in *Red Lion Broadcasting Co. v. FCC*:<sup>27</sup> “It is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail, rather than to countenance monopolization of that market, whether it be by the Government itself or a private licensee.”<sup>28</sup> More recently, the Court in *Turner Broadcasting System, Inc. v. FCC (Turner I)*<sup>29</sup> reiterated that “[t]he potential for abuse of this private power over a central avenue of communication cannot be overlooked. The First Amendment’s command that government not impede the freedom of speech does not disable the government from taking steps to ensure that private interests not restrict, through physical control of a critical pathway of communication, the free flow of information and ideas.”<sup>30</sup>

The Court sees the first amendment as embodying a commitment to robust public discourse and individual expressive freedom, not as a technical rule against regulation *qua* regulation. As the technological and economic parameters of mass media concentrated, commercialized, and homogenized information production and exchange, the Court accepted the potential necessity of government regulation to counteract these effects in service of a more robust and free exchange of ideas. The fear expressed by Chafee—that government could abuse benign media regulation or could simply get it so wrong as to have significant deleterious effects on free speech—has evolved into the heightened scrutiny adopted in *Turner I*. There, while accepting the potential legitimacy and importance of must-carry regulation, the Court nonetheless retained an important role in examining this benign legislation precisely to verify that it is in fact benign, rather than either censorial or seriously ill advised.

In the digitally networked environment, there is a better way to serve the goals that have long justified structural media regulation. This environment could, in principle, be designed on a widely distributed model, where individuals and small groups can express themselves, exchange views, and create their own information environment with a reach and efficacy not possible since the rise of mass media.

The reasons underlying this potential shift in the capacity to produce the information environment are the radical reduction in the cost of processors and the flat, distributed design of the Internet. Together these mean that relatively cheap end points in a network—computers—can produce quite sophisticated communications, access the Internet, and

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27. 395 U.S. 367 (1969).

28. *Id.* at 390.

29. 512 U.S. 622 (1994).

30. *Id.* at 657 (citations omitted).



disseminate them more or less everywhere. Technically, the Internet has no center to control who gets to say what to whom. Economically, the low cost of producing and communicating information means that the old points of concentration—the presses and distribution systems, the broadcast transmitters and licenses, the cable systems—no longer present the same insurmountable barriers to entry to becoming a speaker as they do in the mass mediated environment.

On its face, this suggests that the emergence of the digitally networked environment would counsel a no-regulation approach. The mass mediated environment is no longer the sole source of widely available information exchange. The alternative—the digitally networked environment—no longer suffers from the same structural imbalances that traditionally justified regulation. One might imagine that this is the time for the regulators to rest.

A closer look suggests something quite different. We are making regulatory choices at all layers of the information environment—the physical infrastructure, logical infrastructure, and content layers—that threaten to concentrate the digital environment as it becomes more central to our social conversation. These include decisions about intellectual property law, which can make ownership of content a point of reconcentration, decisions about the design of software and its standards, and the regulation of physical infrastructure available to Internet communications, like cable broadband services. At all these layers, the wrong decisions could enable a reproduction of the mass media model, with all its shortcomings, in the digitally networked environment. Avoiding making these mistakes should be the focus of the efforts we have traditionally focused on structural media regulation. An open, free, flat, peer-to-peer network best serves the ability of anyone—individual, small group, or large group—to come together to build our information environment. It is through such open and equal participation that we will best secure both robust democratic discourse and individual expressive freedom.

#### IV. REPRODUCTION OF THE CONSUMER-PRODUCER RELATIONSHIP AT THE CONTENT LAYER

No case more starkly represents the concentrating effect of a law that assumes a producer-consumer model than the *Los Angeles Times v. Free Republic* case.<sup>31</sup> In late 1999, the *Washington Post* and the *Los Angeles Times* persuaded a district court that individual users could not cut and

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31. No. 98-7840 (C.D. Cal. Sept. 28, 1998), available at (visited Mar. 17, 2000) <<http://www.techlawjournal.com/courts/freerep/Default.htm>>.

paste stories from their papers onto a political discussion forum. The Free Republic Web site is a gathering place for conservatives and offered a forum where users could post newspaper stories with a comment, and where others could then comment on the piece as well. Sometimes, the users presented these stories as evidence of the leftist bias of the media. The Free Republic forum presents the alternate universe, in which the end points of the information environment are users, rather than consumers. “Quality” in this world is not created by higher fidelity or more celebrity participation. It is created by shared values and a sense of knowing one’s interlocutors and conversing with them. It is a quality created by a diversity of viewpoints as wide and multifarious as the many users who participate in this conversation.

The court in the *Free Republic*, donning its “intellectual property” rather than “public discourse” hat, went out of its way to characterize the Free Republic Web site—which charges no user fees but accepts donations and cross-posts advertisements from other conservative sites—as a commercial use and to deny the quotation of the articles a fair use privilege under the Copyright Act. The court also rejected the defendants’ arguments that enjoining them from using the newspaper stories to criticize their bias put the Copyright Act, so interpreted, in direct conflict with the First Amendment.

The assumption and consequences of this ruling are illuminating. The assumption is that public discourse is best served by increasing incentives to professional, commercial producers who rely on copyright to sell their products, *even at the expense of individual users* who are thereby prevented from engaging in public discourse. Such discourse will only be available to people who have the time to author their own accounts of the underlying facts, and the insights of individual nonprofessional critics will be available only to those willing to go back and forth among multiple sites to get both the critique and the original to which the critique may link (assuming, contrary to current trends, that linking to a specific article does not itself become the subject of some manner of exclusive right).<sup>32</sup>

This decision is a quintessential instance of a self-fulfilling perception of the world. One starts with an assumption that there are producers and consumers and that consumers are better off when producers have high incentives to produce. One then creates a regulatory system that increases the incentives for commercial production but also increases the costs of

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32. The relevant case, settled out of court, is Ticketmaster’s suit against Microsoft for linking directly to specific events available on Ticketmaster’s site, rather than to Ticketmaster’s home page where the users could be exposed to all the layers of advertising before reaching the desired event.

becoming any kind of producer,<sup>33</sup> forcing producers to try to recoup these high entry costs by selling to wide audiences. This results in a relatively small number of producers able to fund full-time authoring and pay licensing fees to use existing information, who attempt to recover their investments by capturing wide audiences. Opposite these producers is a wide, passive audience of consumers constrained to select what they buy from a narrow, relatively homogenous menu of choices intended to guess what a large number of them will select under these conditions. These producers, in turn, make up the political lobby for continuing the basic structure as it is. This political economy is responsible for an extensive enclosure movement that has pushed our intellectual property law toward ever-increasing centralization, and has squelched concerns that this galloping proprietization is attained at the expense both of innovation and of robust democratic discourse that a well-balanced intellectual property law could serve.<sup>34</sup>

## V. REPRODUCTION OF THE CONSUMER-PRODUCER RELATIONSHIP AT THE LOGICAL LAYER

Imagine a ten-year-old girl doing her homework on the history of the Holocaust. Her multimedia paper includes a clip from *Schindler's List*, in which Oscar Schindler looks over the town and sees a little girl, in red, the only color image on the screen, walking through the pandemonium. In her paper, the child superimposes her own face over that of the girl in the film. The paper is entitled *My Grandmother*.

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33. One generally understood effect of intellectual property rights is that they increase both expected revenues and costs for producers because information is not only an output but also an input into the information production process. If a particular use of information is subject to an exclusive right, then its owner will be able to charge for that use, and others who wish to make such use as part of their own creative process will incur higher costs. For a look at how this effect plays out when one explicitly considers a multiplicity of strategies of appropriation, see Yochai Benkler, *Intellectual Property and the Organization of Information Production*, available at (visited Mar. 17, 2000) <<http://www.law.nyu.edu/benkler/Ipec.PDF>>.

34. For a discussion of the political economy, see Yochai Benkler, *Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information*, 15 BERKELEY TECH. L.J. (forthcoming April 2000). See generally Jessica Litman, *Copyright, Compromise, and Legislative History*, 72 CORNELL L. REV. 857, 869-79 (1987) (describing the nature of the 1976 Act's provisions as a negotiated settlement among specific stakeholders); Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134, 135; James Boyle, *Sold Out*, N.Y. TIMES, Mar. 31, 1996, at D2; Peter A. Jaszi, *Goodbye to All That—A Reluctant (and Perhaps Premature) Adieu to a Constitutionally-grounded Discourse of Public Interest in Copyright Law*, 29 VAND. J. TRANSNAT'L L. 595 (1996) (describing industrial policy concerns trumping public interest concerns in legislative process).

Fade. In New York, California, and Connecticut, the movie industry is persuading courts to shape the evolution of digital technology so that *My Grandmother* will never be written. In *Universal Studios, Inc. v. Reimerdes*,<sup>35</sup> the court enjoined the distribution of the means by which our protagonist might cut, paste, and rework the snippet, finding them illegal under the DMCA. That Act prohibits decrypting code that protects copyrighted work, and prohibits devices or services that enable such decoding. The court held that the traditional “fair use” defense—which would have protected our little girl, as it would a journalist or parodist, from an old fashioned copyright suit—does not apply to the DMCA, and that the prohibition on circumventing the encryption of copyrighted works, even though it can prevent privileged uses of works and is not subject to fair use, does not violate the First Amendment.

*Reimerdes* is part of a series of suits that Hollywood brought against Web sites that distribute or link to decryption software called DeCSS. DeCSS is software that allows users to circumvent the encryption of DVDs so as to play them on Linux-based computers. The important thing to underscore about this case is that the court found that “even if DeCSS were intended and usable solely to permit the playing, and not the copying, of DVDs on Linux machines, the playing . . . would . . . violate the statute.”<sup>36</sup> On this extremely expansive theory, the DMCA permits the owners of copyright to design the logical layer of the distribution media of their work to assure that their works are perfectly protected by technology, irrespective of whether the uses that users are seeking to make of these works are privileged by law.

An injunction like the one granted in *Reimerdes* undermines the availability of our cultural commons as a resource for personal expression and public discourse. In the predigital environment copyright gave owners some rights to profit from their work, but law and reality made it impossible to track or physically prevent all uses of “owned” cultural products in school papers or personal conversations. Spielberg could charge for all sorts of ways of viewing *Schindler* but could not prevent *My Grandmother* from being made. This is what made it possible for commercial vendors of cultural products to coexist with a vibrant public conversation. Now, movies released in encrypted digital format can be made impervious to this kind of creative recreation, and the recording industry can peek into college dorms to see if kids are mixing their own tapes.

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35. No. 00 Civ. 0277 (LAK) (S.D.N.Y. Feb. 2, 2000), available at (visited Mar. 17, 2000) <<http://www.nysd.uscourts.gov/courtweb/pdf/00-01149.PDF>>.

36. *Id.* at 9-10 n.14.

Again, the relationship between the assumption of the centrality of securing incentives for commercial producers and the consequent design of the information environment is stark. In securing the perfect pay-per-play environment, this broad interpretation of the DMCA builds the mass media model into the very logic of the information environment and undermines the capacity of each user in this environment to partake of our common cultural conversation.

## VI. REPRODUCTION OF THE CONSUMER-PRODUCER RELATIONSHIP AT THE PHYSICAL INFRASTRUCTURE LAYER

In April 1997, the FCC concluded a long regulatory process by allocating three hundred megahertz of broadcast spectrum for digital television services.<sup>37</sup> Based on an express commitment to preserve the broadcast model of communications for video programming, the FCC replicated in its allocation decision the current market structure in terrestrial television broadcast. First, each existing broadcaster received an allocation for digital television transmission that covers the same market it serves by analog television transmissions.<sup>38</sup> Second, the FCC required that licensees provide: "free digital video programming service the resolution of which is comparable to or better than that of today's service and aired during the same time periods that their analog channel is broadcasting."<sup>39</sup> Construction and "spectrum recovery" requirements in the *DTV Orders* force broadcasters to construct the capabilities for digital television transmission within two to five years and anticipate elimination of all analog television broadcasts. Combined, the *DTV Orders* require both American households and licensees to purchase expensive new equipment optimized to deliver digital wireless transmission in the producer/consumer broadcast model.

Moreover, as the regulatory process advanced, it became clear that the six-megahertz allotments that each broadcaster would receive were not necessary to permit the broadcaster to transmit a high definition signal. Because of the efficiencies of digital transmission relative to analog, more information could be conveyed over the same bandwidth. The result was that even as the FCC was deciding to replicate the current broadcast system in the digital spectrum, it explicitly understood that this decision meant that these same licensees could now transmit two HDTV programs

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37. See *Advanced TV Sys. and their Impact upon the Existing TV Brdcast. Serv., Fifth Report and Order*, 12 F.C.C.R. 12,809, 7 Comm. Reg. (P & F) 863 (1997) (collectively know as the *DTV Orders*).

38. See *id.* at para. 27.

39. *Id.* at para. 28.

simultaneously or up to five standard definition programs. The FCC nonetheless decided to keep the licenses in the hands of incumbents and not to split the allocations so as to permit new licensees. Congress aggravated the effect by threatening to remove licenses from broadcasters and networks that dared suggest they would rather offer more programs than transmit the same number of programs with more pixels.<sup>40</sup> Concerned, presumably, with public exposure of the folly of granting incumbent licensees five channels instead of multiplying the number of licensees by five, the congressional proponents of the DTV giveaway made sure that all recipients of this bounty transmitted high definition programming.

These decisions kept the cost of becoming a broadcaster artificially high. First, they required broadcasters to acquire expensive new equipment. Second, they kept the cost of a license equal to the size of the audience in a given market divided by the number of analog channels that served it in the past, instead of one-fifth that price (which would have been the price had the number of broadcasts been multiplied by the number of channels that can be broadcast over six megahertz in standard definition). At such a high cost, the cost of entry into the market for broadcasting remains too high to permit the emergence of providers with budgets that are independent of eyeballs captured—like universities or civic organizations.

Three months before it adopted the *DTV Orders*, the FCC identified a three hundred megahertz band of radio frequencies and permitted devices capable of high bandwidth, high speed data transmission rates, and capable of multiplexing—sharing spectrum without exclusive transmission rights—to operate without an individual license. This decision (*U-NII Order*)<sup>41</sup> effectively created a spectrum commons, available as unowned infrastructure for anyone who buys equipment capable of using it. The U-NII Band would allow individuals and organizations to purchase computers with radio communications capabilities and sufficient bandwidth to support voice and video communications as well as much higher data transmission rates than those available from most facilities today (up to twenty megabits per second). The technical parameters necessary to share spectrum allow,

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40. See Joel Brinkley, *Under Pressure, 2 Broadcasters Decide They Will Run HDTV*, N. Y. TIMES, Sept. 18, 1997, at D1 (describing how broadcasters like ABC & Sinclair were forced by Congress to recant their heretical plans to offer multiple programs, including pay-per-view, over their DTV allocations, and not to offer a single channel in high definition format).

41. The abbreviation stands for “Unlicensed-National Information Infrastructure,” and reflects the Commission’s aspiration that the U-NII Band could provide a part of the local infrastructure for the information infrastructure, either replacing LANs or providing a potential local loop for community networks.

almost require, that the U-NII Band be patterned on the Internet model of communications.<sup>42</sup>

The *U-NII Order* and the *DTV Orders* push in diametrically opposite directions. The former encourages the development of an Internet model of communications for the digitally networked environment if end users invest hundreds of dollars in home equipment capable of operating in a distributed, high bandwidth data-transmission environment. The latter encourages development of a broadcast model of communications for digitally encoded information if end users invest hundreds of dollars in buying equipment whose primary design specification is that it can passively receive high resolution video images.

The institutional choice to foster the deployment of high definition television as a replica of the NTSC system is a stark example of institutional choices that can affect information flow patterns in society. It is by no means the only choice that could have such effect. I have elsewhere suggested<sup>43</sup> the similarities of that choice with the choice made in the Telecommunications Act of 1996<sup>44</sup> to permit telephone company entry into the video delivery market on an open video system model, rather than on a common carriage model that the FCC had previously adopted.<sup>45</sup>

Most prominent in current debates is the question of open access to cable broadband facilities. The question has arisen primarily in the context of AT&T's emergence as the nation's leading cable operator. AT&T offered its proprietary cable internet service as the only internet service available for use with its cable modems and refused to permit any competing internet service providers (ISPs) to offer service over its system. This has raised regulatory concerns both at the FCC and in local franchising authorities.<sup>46</sup>

The point about cable access needs to be thought of less with AT&T in mind, however, than with AOL-Time-Warner. The point to understand is that if all consumers whose cable system is owned by AOL are offered broadband Internet access only by AOL, these consumers will end up with

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42. For a more complete discussion of the U-NII Band and its implications for spectrum management policy, see Benkler, *supra* note 10.

43. See Benkler, *supra* note 12.

44. See 47 U.S.C. § 549 (Supp. III 1997). Telephone companies who adopt this model will be rewarded by removal of some regulatory burdens associate with cable operations.

45. See Telephone Co.-Cable TV Cross-Ownership Rules, Sections 63.54-63.58, *Second Report and Order, Recommendation to Congress, and Second Further Notice of Proposed Rulemaking*, 7 F.C.C.R. 5781 (1992).

46. An FCC Staff report summarizes the problem and cases relating to it. See *Broadband Today*, available at <<http://www.fcc.gov/Bureaus/Cable/Reports/broadbandtoday.pdf>>.

something that is more like a five hundred channel cable system than a peer-to-peer network of users. AOL is a company whose business model depends on capturing consumers who do not know what “getting on the internet” means, and then persuading these consumers to pay a premium for access that is not to the Internet primarily but to AOL proprietary content. It is immensely successful in this business model. With its new cable systems and Time-Warner content, it could design a system where most default choices lead consumers to stay within the AOL-Time-Warner system, rather than to venture outside of it.

Furthermore, whether the “technical reasons” that cable broadband services cite are real or imagined, the reality is that there is vast asymmetry in the information flows of these networks. Designed to carry broadcast-like signals, cable systems offer tremendous downstream, to-the-consumer flows, and narrow upstream flows. These companies, for example, prohibit users from using their connection to host a server—to become a competing producer of information, as opposed to merely its consumer.<sup>47</sup> They also prohibit video streaming for over ten minutes, which could have enabled small video producers or local town hall meetings to use this medium as competing sources of real time video images of cultural products or political or other public conversations.

Competing ISPs can compete with an AOL-Time Warner precisely by offering users different types of capacities over the same system. These ISPs are the primary potential separating agent between the ownership of the carriage medium and control of the content. Two or three or even five or six such ISPs could replicate the same business model as I ascribed to AOL-Time-Warner, integrating with other owners of large inventories of proprietary materials. But if the number of ISPs competing in this market approaches that of the ISPs offering Internet access over telephone wires, then there must develop a significant market whose role is to enable users to provide information, rather than merely to access it. That is the core point at which the five hundred channel model flips over to an Internet model of peer users.

## VII. INTERMEZZO

What we see in looking at a series of regulatory choices made in various contexts is that choices that assume a producer/consumer model often perpetuate this model by regulating in a manner that increases the

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47. See R. H. Lewis, *Picking the Right Data Superhighway*, N.Y. TIMES, Nov. 11, 1999, at G1. (surveying broadband services and finding that “The two leading cable data services, Time Warner’s Roadrunner and @Home, forbid residential customers to run Web server computers on the network.”)



costs of becoming a producer of information. Such increases in costs lead to three effects:

- Concentration—because the cost of becoming a professional provider of the type whose activity is facilitated by the regulation creates an entry barrier.
- Commercialization—because of the high cost providers must adopt a strategy that relies on sale of their information and cultural products, and it becomes more difficult to sustain production on a noncommercial model
- Homogenization—because most producers must be commercial, their reasons to produce are similar, and their need to attract wide audiences leads to convergence of the content towards the mainstream and the inoffensive.

### VIII. FROM PROPERTY AND FREE/AFFORDABLE RECEPTION TO COMMONS AND UBIQUITOUS ACCESS

Two policy goals should be the operative midlevel goals for implementing a commitment to enable the development of a network of peers. The first is a commitment to identifying and sustaining a series of commons in the resources necessary for the production and exchange of information. The second is a shift in the focus of the distributive policies from low cost or free reception—through, most obviously, subsidies to over-the-air television—to ubiquitous access to the facilities necessary for production and dissemination of information.

In the preceding Part, I alluded to the commons in two layers: the physical infrastructure and content layer. With the former, the U-NII and an expansion of the same principles to ultra wideband devices that would operate underneath many licensed services provide the obvious example. For over half a decade commentators like Paul Baran, George Gilder, and most extensively Eli Noam, have suggested that the introduction of spread spectrum and other multiplexing techniques undermine the perceived necessity to ration spectrum by granting either licenses or property rights.<sup>48</sup> I have explained why, in combination with a robust end user equipment

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48. See George Gilder, *The New Rule of the Wireless*, FORBES, Mar. 29, 1993; Eli Noam, *Spectrum Auction: Yesterday's Heresy, Today's Orthodoxy, Tomorrow's Anachronism: Taking the Next Step to Open Spectrum Access*, 41 J. LAW & ECON. 765 (1998); Eli Noam, *Taking the Next Step Beyond Spectrum Auctions: Open Spectrum Access*, 33 IEEE COMM. MAG. 66 (1995); Paul Baran, *Visions of the 21st Century Communications: Is the Shortage of Radio Spectrum for Broadband Networks of the Future a Self Made Problem?* Keynote Talk Address at the 8th Annual Conference on Next Generation Networks (Washington, D.C. Nov. 9, 1994), available at <[http://www.eff.org/pub/GII\\_NII/Wireless\\_cellular\\_radio/false\\_scarcity\\_baran\\_cngn94.transcript](http://www.eff.org/pub/GII_NII/Wireless_cellular_radio/false_scarcity_baran_cngn94.transcript)>.

market, these technological developments enable a sustainable shift from any form of organizational clearance—be it by a licensee, an owner of spectrum, or the clearinghouse proposed by Noam—to an Internet-like system that relies on end user equipment-based queuing protocols to coordinate communications.<sup>49</sup> While such a system may not perfectly serve all real-time communications with assured quality of service, it could well offer an infrastructure of first and last resort for many valuable communications that users care about—data transmission, including delayed video delivery, asynchronous communications, online games, community (voice and video) chat rooms, or even the ability to participate in the local town hall video conference with occasional low resolution blips.

The commons in the air will not supplant licensed services or wired services, but will offer a fundamental, universally available infrastructure that each user can use for whatever he or she desires, subject only to the etiquette of sharing this commons. And that is precisely the point of securing a commons in an input necessary for information production and exchange. It is not intended to supplant all other forms of creating and disseminating information. Rather, it is intended to offer a background resource available to all *as users*.

A robust public domain in existing information and in various creative uses of copyrighted or otherwise exclusively owned information similarly is not intended to displace professional commercial production. It is, however, intended to assure that enough cultural raw material is available to nonprofessionals for reworking, so that users can create their own collages and expressions of the world and participate in the production of their own information environment.

At the logical layer, this requires self-conscious policy choices to support the development of free software and open source strategies for software development. Most urgently, it means that policy should resist the efforts of owners of copyrighted materials to quash the development of software that gives users the power to manipulate and fit to their own needs the cultural or information products that they use. It is of central importance to reverse the attempts to use the DMCA to close up the software layer of the information environment and diminish the possibility that a robust public domain will in fact lead to widespread accessibility to the basic building blocks of participation in our public conversation.

Judicially, this would require rejection of technology control suits such as those described in the preceding Part. Legislatively, this reversal

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49. See Benkler, *supra* note 12, at 299-318.

should take the form of introducing an explicit general fair use exemption from the anticircumvention provisions of the DMCA—so users who have a privilege to use the materials kept under digital lock also have a privilege to open the lock. It also requires a privilege for the makers of software that enables users to access information for the DMCA's antidevice provision. Just as the makers of VCRs are not liable for manufacturing machines capable of illegally coping movies as well as time-shifting broadcasts, so, too, makers of circumvention facilities with substantial noninfringing uses should be exempt from liability.

Where, as in the case of cable-based broadband services, a commons cannot be secured because the economics of the resource are incompatible with a sustainable commons, structural policy should focus on access. Once legislatures conceive those whose welfare they serve as users, rather than as consumers, the relevant focus of regulation should shift to enabling the widest possible range of users to use the resource for active communication, not simply for passive reception.

An example of such a focus could be the currently considered public interest obligations of the DTV licensees.<sup>50</sup> Recall that one of the effects of digitization is that a six-megahertz channel can carry up to two HDTV or five standard definition television signals. These can also be scrambled, and hence offered on a pay, rather than free basis. A user-focused public interest obligation would not focus on attempting to create some content requirements vague and general enough to withstand First Amendment challenge. A more appropriate focus is the importation of a concept from cable—public, educational, and governmental access channels—on one standard definition channel, coupled with a requirement to devote a percentage of fees collected from pay services, if any, to fund facilities available to those individuals and organizations who take advantage of the access channels. While this is not a first-best solution as compared to much wider distribution of licenses, it is a better solution, given that the FCC granted licenses to the incumbent broadcasters in the way that it did, than requirements focused on quality of programming. In other words, rather than try to guess what the viewers want but do not get from commercial broadcasters, the regulation would structure part of the medium to allow users to communicate what they consider to be worthwhile communicating via the medium.

Similarly, in the question of broadband over cable, the correct focus in evaluating the AOL-Time-Warner merger, for example, should be on cable access—on the extent to which the infrastructure is open to

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50. See Public Interest Obligations of TV Brdcast. License, *Notice of Inquiry*, 1999 WL 1211119 (Dec. 15, 1999) (MM Docket No. 99-360).

competing ISPs to offer service. If the owner of a large content library and an ISP that aims to keep its consumers within the bounds of its proprietary services in order to market their eyeballs to advertisers will be the sole gateway to those broadband users who have cable modems, many of them will remain consumers. Access for competing ISPs would serve in this case to introduce an element into the broadband delivery system whose incentives are to enable users to be users. This, in turn, is what will facilitate the transition of users of broadband Internet access over cable from consumers to users.

## IX. CONCLUSION

The emergence of the digitally networked environment makes possible the development of a robust, open social conversation in which all can participate as peers. This technological and economic possibility is not, however, preordained. Decisions about the organization and regulation of the content, logical, and physical layers of the Internet will determine whether the digital environment will eventually, in large measure, replicate the mass media model, or whether it will indeed change the deep structure of our information environment. The focus of the policy concerns that have traditionally justified structural media regulation should, at this time, be focused on assuring that the digitally networked environment evolves into a stable system for peer users, rather than towards a system in which commercial producers and passive consumers are the primary players. These goals suggest that we develop and sustain commons, wherever possible, in the resources necessary for the production and exchange of information, and that we design provisions enabling access to the resources that cannot be sustained as commons. Such a policy focus would be a more effective means than traditional structural media regulation of securing robust democratic discourse and individual expressive freedom.

