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LOCHNER IN CYBERSPACE: THE NEW ECONOMIC ORTHODOXY OF "RIGHTS MANAGEMENT"

Julie E. Cohen^a

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^a (c) 1998, Julie E. Cohen. Visiting Assistant Professor, Georgetown University Law Center (Fall 1998); Visiting Assistant Professor, University of Michigan Law School (Winter 1999); Assistant Professor, University of Pittsburgh School of Law. A.B. 1986, Harvard-Radcliffe; J.D. 1991, Harvard.-- Ed. Internet: cohen@law.pitt.edu. I thank Phil Agre, Ed Baker, Jack Balkin, Tom Bell, Dan Burk, Richard Chused, Karen Clay, Susan Freiwald, Dennis Karjala, Arthur Hellman, Mark Lemley, Larry Lessig, Michael Madison, Henry Monaghan, Neil Netanel, Maureen O'Rourke, John Parry, Pamela Samuelson, M. Douglas Scott, Lu-in Wang, Rhonda Wasserman, and participants in a faculty workshop at Georgetown University Law Center for their helpful comments and Steven Serdikoff, Richard DeCristofaro, and especially Will Martin for research assistance. An earlier version of this Article was presented at the Twenty-Fifth Telecommunications Policy Research Conference, held September 27-29, 1997 in Alexandria, Virginia. I thank the conference organizers, particularly Jessica Litman, for giving me the opportunity to test and refine the ideas discussed here. This Article was prepared in part with the assistance of a Dean's Summer Scholarship Grant from the University of Pittsburgh School of Law.

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Ninety-three years ago, in *Lochner v. New York*,¹ the Supreme Court struck down a maximum-working-hours law for bakers as an impermissible invasion of employer-employee liberty of contract and, by implication, of the employer's property rights in his business. *Lochner* came to symbolize, and was vilified for, a vision of state power as rigidly circumscribed by the operation of judicially-determined laws of social ordering.² By the late 1930s, the Court had changed course and accepted that the states' police power--or, in the case of Congress, the commerce power--encompassed even protective regulation of the parameters of the private employment contract.³ Within the modern legal academy, "*Lochner*" has become an epithet used to characterize an outmoded, over-narrow way of thinking about state and federal economic regulation; it goes without saying that hardly anybody takes the doctrine it represents seriously.⁴ In fact, however, the economic vision embodied in *Lochner* is alive and

¹ 198 U.S. 45 (1905).

² See, e.g., Owen M. Fiss, *Troubled Beginnings of the Modern State, 1888-1910*, at 4-7, 157-65 (1993); Stephen A. Siegel, *Lochner Era Jurisprudence and the American Constitutional Tradition*, 70 N.C. L. Rev. 1, 2-4 (1991); Cass R. Sunstein, *Lochner's Legacy*, 87 Colum. L. Rev. 873, 873-74 (1987). Historians of *Lochner*-era jurisprudence have differed as to the precise origin of perceived limits on state power. Compare, e.g., Fiss, *supra*, at 46-49, 158- 59 (arguing that the state's limited powers derived from its limited purposes under Lockean social contract theory) with, e.g., Siegel, *supra*, at 78-90 (arguing that *Lochner*-era jurists viewed state power as constrained by traditional common-law principles derived initially from natural law) with, e.g., Michael Les Benedict, *Laissez-Faire and Liberty: A Re-Evaluation of the Meaning and Origins of Laissez-Faire Constitutionalism*, 3 L. & Hist. Rev. 293, 298 (1985) (arguing that perceived limits on state power were grounded in classical economic notions of "liberty" and prohibited only "class" or interest-group legislation) with, e.g., Arnold M. Paul, *Conservative Crisis and the Rule of Law* (1960) (arguing that *Lochner* represented naked judicial activism on behalf of the propertied elites). For purposes of this Article, however, it is sufficient to note that all four explanations rest, ultimately, on a belief in the primacy of private property and private ordering, and in the illegitimacy of social actions that appeared to redistribute property or wealth.

³ See *NLRB v. Jones & Laughlin Steel Corp.*, 301 U.S. 1 (1937); *West Coast Hotel Co. v. Parrish*, 300 U.S. 379 (1937); see also Fiss, *supra* note 2, at 6-8, 181; Benedict, *supra* note 2, at 305-14.

⁴ See, e.g., Laurence H. Tribe, *American Constitutional Law* §§ 8-5 to - 7 (2d ed. 1988) (describing the doctrinal and political reasons for the *Lochner* doctrine's demise). But see Richard Epstein, *Takings: Private Property and the Law of Eminent Domain* 277-82 (1985); Bernard H. Siegan, *Economic Liberties and the Constitution* 23, 110-25 (1980) [hereinafter Siegan, *Economic Liberties*]; Norman Karlin, *Back to the Future: From Nollan to Lochner*, 17 Sw. U. L. Rev. 627 (1988); Bernard H.

well on the digital frontier. Its premises-- the sanctity of private property and freedom of contract, the sharply delimited role of public policy in shaping private transactions, and the illegitimacy of laws that have redistributive effects--undergird a growing body of argument and scholarship concerning the relative superiority (as compared with copyright) of common law property and contract rules for protecting and disseminating digital works.⁵ In their contemporary incarnation, these premises are embedded in the rhetoric of economic efficiency. In place of social contract theory, their proponents argue from purportedly neutral, scientific truths about the way markets in general, and information markets in particular, operate.

These truths, I shall argue, are nothing of the sort. Rather, they are "just-so stories" that mask the need for first-order social welfare choices about the sort of information society we want to have. Their proponents, whom I christen the "cybereconomists," argue that the most efficient legal regime, measured by its success at inducing the creation of digital works and increasing consumers' access to information, is that which permits copyright owners to maximize control over the terms and conditions of use of their digital property.⁶ However, the economic case they build is anything but convincing. It is based on an

Siegan, *Rehabilitating Lochner*, 22 *San Diego L. Rev.* 453 (1985) [hereinafter *Siegan, Rehabilitating Lochner*]; Christopher T. Wonnell, *Economic Due Process and the Preservation of Competition*, 11 *Hastings Const. L.Q.* 91 (1983); Note, *Resurrecting Economic Rights: The Doctrine of Economic Due Process Reconsidered*, 103 *Harv. L. Rev.* 1363 (1990); see also Anthony S. McCaskey, *Comment, Thesis and Antithesis of Liberty of Contract: Excess in Lochner and Johnson Controls*, 3 *Seton Hall Const. L.J.* 409 (1993) (advocating an intermediate level of economic due process protection). Cass Sunstein has argued, however, that central elements of the *Lochner* Court's analytic framework underlie much current thinking about individual rights. See Sunstein, *supra* note 2, at 875.

⁵ See Christopher Burns, Inc., *Copyright Management and the NII: Report to the Enabling Technologies Committee of the Association of American Publishers* 17-21, 29-36 (1996); Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 *N.C. L. Rev.* 557 (1998); Charles Clark, *The Publisher in the Digital World*, in *Intellectual Property Rights and New Technologies: Proceedings of the Knowright '95 Conference* 85, 99 (Klaus Brunnstein & Peter Paul Sint eds., 1995); I. Trotter Hardy, *Property (and Copyright) in Cyberspace*, 1996 *U. Chi. Legal F.* 217; Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 *Cal. L. Rev.* 1293 (1996) [[hereinafter *Merges, Contracting into Liability Rules*]]; Robert P. Merges, *The End of Friction? Property Rights and Contract in the "Newtonian" World of On-Line Commerce*, 12 *Berkeley Tech. L.J.* 115 (1997) [[hereinafter *Merges, The End of Friction?*]]; Maureen A. O'Rourke, *Copyright Preemption After the ProCD Case: A Market-Based Approach*, 12 *Berkeley Tech. L.J.* 53 (1997) [hereinafter *O'Rourke, Copyright Preemption*]; Maureen A. O'Rourke, *Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms*, 45 *Duke L.J.* 479 (1995) [hereinafter *O'Rourke, Drawing the Boundary*].

⁶ See Bell, *supra* note 5; Hardy, *supra* note 5; Merges, *Contracting into Liability Rules*, *supra* note 5; Merges, *The End of Friction?*, *supra* note 5; O'Rourke, *Drawing the Boundary*, *supra* note 5. The "progress" and "access" criteria are widely accepted as the test of any regime of entitlements in creative and informational works. The "progress" criterion is constitutionally-mandated. See U.S. Const. art. I, § 8, cl. 8 (authorizing Congress to grant intellectual property rights "[t]o promote the Progress of Science and useful Arts"). The "access" criterion follows from it, both because "progress" is of little value unless its fruits are made available to the public, and because knowledge is cumulative, so that the public availability of creative works promotes further progress. See, e.g., Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 *Berkeley Tech. L.J.* 93, 98-101 (1997); Robert A. Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 *UCLA L. Rev.* 1 (1995); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 *J. Legal Stud.* 325, 326-27 (1989); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 *Texas L. Rev.* 989, 993-99 (1997); Jessica Litman, *The Public Domain*, 39 *Emory L.J.* 965 (1990). But see Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 *Vand. L. Rev.* 483 (1996) (arguing that society should also consider the opportunity cost created by the copyright regime, measured in terms of other, non-creative activities that might produce greater social

essentialism about the nature of "contract" and "market" that is manifestly unsuited to mass-market transactions, on a reflexive and unsubstantiated distrust of the legislative process as compared with the market, and on assumptions about the nature of "property" and the best ways of managing it that are wholly unproven and arguably unjustified in the case of creative and informational works. Taken together, the cybereconomists' arguments and proposals amount to ideology, not science.⁷ Designing the optimal regime of rights in digital works requires, instead, explicit choices about the degree of author/publisher control, and the extent of freedom from such control, that society finds desirable.

Part I of this Article describes the economic models now proffered as the basis for defining rights in digital works, and explores their striking resemblance to the system of social ordering described and advanced in the Supreme Court's *Lochner*-era decisions. The ghost of *Lochner* is not invoked lightly, nor with intent to belittle. *Lochner* represented a particular ideal of social ordering, premised on a seamless convergence of the private-law institutions of property and contract to provide a zone of legal insulation for market outcomes.⁸ In the physical world, that vision has long been compromised by evidence of market failures that all but the most die-hard Chicago school economist cannot help but acknowledge. The cybereconomists' argument, in essence, is that cyberspace more closely approximates the conditions necessary for perfect markets, and that under these conditions, a legal regime based primarily or even exclusively on the private-law institutions of property and contract is appropriate. This argument, moreover, had found favor with government policymakers, who have used similar reasoning to frame legislative and treaty recommendations.⁹ It is both fair and important to ask whether en route to their conclusions, the cybereconomists have corrected the *Lochner* Court's methodological lapses, or simply reproduced them.

welfare). This Article does not challenge the progress and access criteria, but only the means by which the cybereconomists argue they are most effectively pursued.

⁷ Economics is, of course, a social science, and one which as a matter of historical record has no great claim to predictive accuracy. For that matter, historians of science and technology have long recognized that science and technology themselves are not value-free. See, e.g., Jacques Ellul, *The Technological Society* (John Wilkinson trans., 1973); Bruno Latour, *We Have Never Been Modern* (Catherine Porter trans., 1993); Lewis Mumford, *Technics and Civilization* (2d ed. 1963); cf. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (2d ed. 1970) (arguing that our perceptions of scientific "facts" are shaped by the paradigms that we employ to make sense of them).

⁸ See *infra* text accompanying notes 13-23, 161-71 (discussing the relation between freedom of contract and property rights in *Lochner*-era jurisprudence).

⁹ See, e.g., Information Infrastructure Task Force, United States, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights* 49-53, 58-59, 64-66, 70-72, 79-84, 177-92, 230-32 & app. (1995) [hereinafter *NII White Paper*] (outlining vision of digital copyright regime under which copyright owners are free to contract around copyright's limited entitlements, and proposing legislation designed to implement this vision); Julie E. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 *Berkeley Tech. L.J.* 161, 165-66 & n.17 (1997) (describing Clinton Administration's efforts to secure international treaty provisions similar to its proposed domestic legislation); Pamela Samuelson, *The Copyright Grab*, *Wired*, Jan. 1996, at 134 (detailing differences between Administration's vision of copyright and existing copyright law). For a discussion of the domestic legislation ultimately adopted, see *infra* text accompanying notes 283-85.

Part II demonstrates that the cybereconomists' debt to the social ideology of *Lochner* runs deep. Their proposals turn out to be grounded in identical beliefs about the conceptual primacy of private property and private ordering and the illegitimacy of "redistributive," market-distorting legislation. As a result, their models are neither scientific (in the sense of describing an ineluctable reality) nor neutral, but rather normative and contingent on the very same institutions and arrangements whose absolute efficiency they seek to prove. Their failure to conceive of contract as anything less than voluntary and (definitionally) private, or of property as anything less than complete control, blinds them to the socially constructed nature of the existing mass market for creative works and prevents them from seriously considering whether a regime based on limited ownership rights might be more effective at promoting access and progress. I argue that in light of the special nature of creative and informational works and of creative and intellectual progress, there is substantial reason to believe that a limited-ownership regime is better suited to furthering these goals.

Part III begins the project of developing a stronger, more defensible economic model for digital intellectual property rights. As a tool for understanding information markets, the neoclassically-grounded economic theory to which the cybereconomists subscribe is fatally incomplete. In particular, critiques of the neoclassical paradigm supplied by institutional, welfare-theoretic, and political economists have identified several important factors that should inform efforts to determine the optimal system of rights in digital works. First, Part III explores the dynamics of bargaining power in the consumer mass market for creative and informational works and suggests that, in light of the predominantly reactive nature of consumers' power to affect markets, consumers are more likely to attain relative equality of bargaining power in the legislative arena. Part III then considers the relationship between the legal regime governing rights in digital works and overall social welfare. It demonstrates that allowing content owners to internalize the uncompensated benefits generated by creative and informational works under a limited-entitlements regime would result in underproduction of works that produce significant social benefits. The resulting decrease in social welfare must be offset against any increased value that would be realized through market exchange. The question whether such a regime would be preferable to the current one cannot be answered except by reference to a normative conception of social welfare. Moreover, this choice implicates preferences about the conditions of individual and social self-definition that are not capable of expression and effectuation through the market. In light of these considerations, it would be entirely rational to conclude that a regime of limited entitlements is optimal.

Finally, Part IV considers, and rejects, the cybereconomists' implicit contention that the relatively "frictionless" nature of transactions in cyberspace is a technological imperative that dictates redefining digital property rights in the neoclassical mold.¹⁰ Technology and society constitute each other; if we have not yet developed an alternative technological paradigm for defining and administering rights in digital works, it is because we have not been asking the right questions. I conclude that both the legal regime governing rights in digital works and the technology for implementing it should be determined with reference to expressly chosen social priorities. Under a broader conception of economic theory and of social welfare,

¹⁰ This metaphor is borrowed from Robert Merges. See Merges, *The End of Friction?*, supra note 5, at 136 (likening reduced transaction costs in the digital medium to the absence of friction in "pure" Newtonian mechanics).

society may legitimately choose to retain and institutionalize a limited-entitlements regime for digital works.

I. The Convergence of Economic Imperatives and Natural Rights

Any comparison of turn-of-the-century substantive due process jurisprudence and the contemporary digital "rights management" movement must begin by acknowledging that they differ in several important respects. First and foremost, the question of government power that was so central to *Lochner* does not arise because congressional power to define rights in creative works is express.¹¹ Debates over the appropriate scope of copyright protection focus on how, not whether, government power should be exercised. In addition, the distinctive brand of conceptualism characteristic of nineteenth- and early twentieth-century legal reasoning, which conceived of the law as a system of abstract concepts and categories "capable, more or less, of deductive application" to resolve particular disputes, is, deservedly, a thing of the past.¹² What is striking is that, despite these differences, the economic regimes asserted as natural and neutral by the *Lochner* Court on the one hand, and by contemporary copyright owners and economics-oriented copyright scholars on the other, are so remarkably similar.

The central question in *Lochner* concerned the scope of a state's police powers. Then, as now, the states could legislate on matters concerning the safety, morals, health, and general welfare of the public; however, each of these areas was conceived as narrow and highly specific.¹³ To qualify as health-related (the particular police power at issue in *Lochner*), a law ordinarily had to pertain to the health of the public as a whole; a law protecting a specific class of workers was legitimate as a health law only if it could be shown that the occupation was particularly unhealthful.¹⁴ Alternatively, a class-specific law might be valid as a labor law if it could be shown that the workers engaged in it were uniquely unable to protect themselves, thus justifying their treatment as "wards of the state."¹⁵ A majority of the Court concluded that bakers as a class were neither particularly vulnerable nor especially unhealthy. Accordingly, it reasoned, upholding the maximum-hours legislation on health grounds would work a dramatic expansion of the states' authority to interpose protective regulation in the workplace.¹⁶ This the Court refused to do. Instead, it held the law invalid, and suggested that the state's real intent was to interfere with the results of private

¹¹ See U.S. Const. art. I, § 8, cl. 8.

¹² See Siegel, *supra* note 2, at 23-36 (defining conceptualism and its public-law analogue, "constitutional conceptualism," which looked to the written Constitution as the source of the applicable concepts and categories).

¹³ See *Lochner v. New York*, 198 U.S. 45, 56-57 (1905); Fiss, *supra* note 2, at 159-60; Siegel, *supra* note 2, at 8-12.

¹⁴ See *Lochner*, 198 U.S. at 59-61; see also, e.g., *Holden v. Hardy*, 169 U.S. 366 (1898) (upholding maximum-hours legislation for miners in light of that occupation's "peculiar hazards and perils"); Fiss, *supra* note 2, at 173-74.

¹⁵ See *Lochner*, 198 U.S. at 57; see also, e.g., *Muller v. Oregon*, 208 U.S. 412, 421-22 (1908) (upholding maximum-hours legislation for women because "woman has always been dependent upon man," and because "there is that in her disposition and habits of life which will operate against a full assertion of [[her] rights" to liberty of contract); Fiss, *supra* note 2, at 174-79 (arguing that the Court found *Muller* an easy case "because women were not viewed as [co-equal] members of the community that constituted the state").

¹⁶ See *Lochner*, 198 U.S. at 59-61.

bargaining--presumably, for redistributive or interest-group purposes.¹⁷

The *Lochner* Court's narrow conception of the state's role derived, ultimately, from the Enlightenment vision of the state as constituted via the social contract for limited purposes.¹⁸ Within this vision, legislative authority to shape default rules for social conduct encompassed only the specific terms of the original compact.¹⁹ In significant part, the compact was defined by principles of classical economics, which held that government should not interfere with the "natural" laws of supply and demand.²⁰ In reality, turn-of-the-century governments undertook a broad variety of economic legislation pursuant to their recognized authority to promote the "general welfare."²¹ Outside the bounds of this general regulatory authority, however, the state's role was limited to policing private property rights and enforcing private agreements, both of which were conceived to be inherently prepolitical. "Class" legislation, which altered the economic playing field to the perceived benefit of some and the detriment of others, was regarded as an impermissible invasion of fundamental economic liberty.²² In short, turn-of-the-century jurists and legal scholars viewed the market as the primary engine of social ordering, and believed that the state existed to facilitate the market.²³

¹⁷ See *Lochner*, 198 U.S. at 64; see also *Adkins v. Children's Hosp.*, 261 U.S. 525, 557 (1923) (describing a minimum wage statute as "a compulsory exaction from the employer for the support of a partially indigent person, for whose condition there rests upon him no peculiar responsibility"); *Benedict*, supra note 2, at 305-08 ("[T]he state plainly was interfering on the behalf of one of the parties to a bargain, insofar as unfettered bargaining based on the supply of and demand for labor would have led to a different outcome."); *Sunstein*, supra note 2, at 877-79 ("Because the only available public justifications were insufficient, the minimum wage statute [in *Lochner*] was invalidated as an interest-group deal, reflecting nothing other than political power."); G. Edward White, *Revisiting Substantive Due Process and Holmes' Lochner Dissent*, 63 *Brook. L. Rev.* 87, 88 (1997) (describing *Lochner*-era due process decisions as predicated on "the principle that no legislature could enact 'partial' legislation, legislation that imposed burdens or conferred benefits on one class of citizens rather than the citizenry as a whole").

¹⁸ See, e.g., John Locke, *Two Treatises of Government*, bk. II, §§ 135, 222 (Peter Laslett ed., Cambridge Univ. Press, 2d ed. 1970) (1690).

¹⁹ See supra note 2. Compare *Fiss*, supra note 2, at 158-59 (suggesting that these limits were derived directly from social contract theory), and *White*, supra note 17, at 105-06 (same), with *Siegel*, supra note 2, at 78-90 (arguing that perceived limits on state power were derived only indirectly from "natural law," and that *Lochner*-era jurists turned to traditional common-law concepts and distinctions to give content to the limits).

²⁰ See *Benedict*, supra note 2, at 298-301; *White*, supra note 17, at 105-06.

²¹ See, e.g., *Benedict*, supra note 2, at 304 (describing categories of cases in which the *Lochner*-era Court upheld economic regulation); Harry N. Scheiber, *Private Rights and Public Power: American Law, Capitalism, and the Republican Polity in Nineteenth-Century America*, 107 *Yale L.J.* 823, 836-47 (1997) (book review) (describing debate among historians about the extent to which economic regulation for the "general welfare" was the accepted norm).

²² See Morton J. Horowitz, *The Transformation of American Law 1870- 1960: The Crisis of Legal Orthodoxy* 194 (1992) ("Every effort to interfere with outcomes--to judge overall social justice by results--inevitably subverted the legitimacy of the market process as a neutral and apolitical arbiter of the just distribution of wealth."); *Benedict*, supra note 2, at 311-14; *White*, supra note 17, at 94-100.

²³ See *Locke*, supra note 18, at bk. II, § 222; *Fiss*, supra note 2, at 46-49; *Benedict*, supra note 2; *Siegel*, supra note 2, at 78-81; *Sunstein*, supra note 2, at 887-92; *White*, supra note 17, at 105-06; see also supra note 2. For a modern exposition of this view, see *Epstein*, supra note 4, at 4 ("The implicit normative limit upon the use of political power is that it should preserve the relative entitlements among the members of the group, both in the formation of the social order and in its ongoing operation.").

The emerging market for digital works displays a similar emphasis on private ordering of entitlements and obligations. This development is made possible by the growing use of "click-through" contracts for the online delivery of digital works and by new "rights management" technologies that will allow copyright owners to set unilaterally and enforce automatically the terms and conditions of access to digital content.²⁴ These new technologies radically change the copyright landscape. Copyright laws were created, at least in part, to address a market failure arising from the public-good characteristics of creative works of authorship.²⁵ By guaranteeing authors certain exclusive rights in their creative products, copyright seeks to furnish authors and publishers, respectively, with incentives to invest the effort necessary to create works

²⁴ See Burns, *supra* note 5, at 15-21, 31-35; Peter Wayner, *Digital Copyright Protection* (1997); Jon Bing, *The Contribution of Technology to the Identification of Rights, Especially in Sound and Audio-Visual Works: An Overview*, 4 *Intl. J.L. & Info. Tech.* 234 (1996); Clark, *supra* note 5, at 97- 101; Mark Stefik, *Letting Loose the Light: Igniting Commerce in Electronic Publication*, in *Internet Dreams: Archetypes, Myths, and Metaphors* 219 (Mark Stefik ed., 1996) [hereinafter *Stefik, Letting Loose the Light*]; Mark Stefik, *Shifting the Possible: How Digital Property Rights Challenge Us to Rethink Digital Publishing*, 12 *Berkeley Tech. L.J.* 138 (1997) [hereinafter *Stefik, Shifting the Possible*]; Daniel J. Gervais, *Electronic Rights Management Systems (ERMS): The Next Logical Step in the Evolution of Rights Management* (on file with author) [hereinafter *Gervais, The Next Logical Step*]; International Federation of Reproduction Rights Organizations, *Committee on New Technologies, Digital Rights Management Technologies* (visited Sept. 14, 1998) <http://www.ncri.com/articles/rights_management/ifro95.html>. The most comprehensive investigation of the possibilities and implications of digital rights management technologies is that being conducted by IMPRIMATUR, a consortium of European universities, publishing interests, authors' organizations, and telecommunications providers. For information about IMPRIMATUR, see *Imprimatur* (last modified Oct. 6, 1998) <<http://www.imprimatur.alcs.co.uk>>. For the archive of reports generated by the project, see *Project Documents* (last modified Sept. 24, 1998) <<http://www.imprimatur.alcs.co.uk/download.htm#number>finyear>>.

The term "click-through" (or "click-wrap" or "web-wrap") license refers to a contract created by requiring the would-be purchaser of a digital work to accept various usage restrictions, via a series of mouse "clicks," before granting access to the work. Representatives of various copyright-related industries are now drafting a new Article 2B for the Uniform Commercial Code that would render click-through licenses for digital works valid and enforceable whether or not the terms were actually disclosed before payment. See U.C.C. Art. 2B: Licenses § 2B-208 (Annual Meeting Draft July 1998) (available at <<http://www.law.upenn.edu/library/ulc/ucc2b/2b98.htm>>); *infra* text accompanying note 77.

²⁵ As defined by economists, "market failure" refers to circumstances in which voluntary market exchange cannot achieve the socially optimal allocation of resources. "Public goods" are goods that can be consumed without depletion (non-rivalrous consumption) and that can be withheld from nonpaying beneficiaries only at prohibitive cost (non-excludability). Because non-excludability reduces incentives for private provision, public goods often present market failure problems. See Robert Cooter & Thomas Ulen, *Law and Economics* 40-41 (2d ed. 1997); cf. Letter from Thomas Jefferson to Isaac McPherson (Aug. 1813), in *Thomas Jefferson, Writings* 1286, 1291-92 (Merrill D. Peterson ed., 1984):

If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everyone, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it.... Inventions then cannot, in nature, be a subject of property. Society may give an exclusive right to the profits arising from them as an encouragement to men to produce ideas which may produce utility....

Creative and informational works approach the status of pure public goods in the digital environment, where the marginal cost of producing and transmitting a copy approaches zero.

Other sources of market failure include monopoly, externalities arising from market transactions, and information asymmetries that preclude socially optimal transactions or distort market behavior. See Cooter & Ulen, *supra*, at 38-41.

and distribute them to the public.²⁶ Digital technologies allow more effective fencing of intellectual property, and thus cure some of the market failure problems associated with creative and informational works--although, as I will argue in Part III, they have the potential to create market failures of a different sort.

Most obviously, digital copyright management systems (CMS) will enable copyright owners to enforce automatically many of the rights afforded them by copyright law. In addition, because digital technologies reduce licensing costs, it will become increasingly feasible to levy fees for various uses of copyrighted works that the law has regarded as "fair" and that members of the public currently enjoy at no charge.²⁷ An important strand of copyright scholarship conceives the fair use doctrine as a response to a market failure resulting from prohibitive transaction costs; as a matter of law, moreover, fair use depends in part on findings about market impact.²⁸ Thus, many commentators and some courts have concluded that the scope of fair use online should be narrowed wherever new technologies or licensing mechanisms enable markets to form.²⁹

Ultimately, digital CMS will allow content owners to insist on greater protection than copyright law would afford. For example, in the nondigital world, the first sale of an object embodying a copyrighted work exhausts the copyright owner's exclusive distribution right; digital CMS will enable the copyright owner to extend control over distribution indefinitely--in theory, even for works whose term of copyright protection

²⁶ See, e.g., Elkin-Koren, *supra* note 6, at 98-100; William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 *Harv. L. Rev.* 1661, 1700-04 (1988); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 *J. Legal Stud.* 325 (1989). But see Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 *Harv. L. Rev.* 281 (1970); Gillian K. Hadfield, *The Economics of Copyright: An Historical Perspective*, 38 *Copyright L. Symp. (ASCAP)* 1, 14 (1988) (suggesting that "much of the perceived need for protection in early analyses in fact arose from or was reinforced by the fact of large 'economies of scale' in publishing (augmented by high levels of uncertainty) rather than the 'public goods' problem").

²⁷ Examples include copying for research or classroom use, see 17 U.S.C. § 107 (1994), copying for private home use, see *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984); excerpting for purposes of comment or criticism, see, e.g., *Maxtone-Graham v. Burtchaell*, 803 F.2d 1253 (2d Cir. 1986), cert. denied, 481 U.S. 1059 (1987); parody, see *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569 (1994); and the decompilation of computer software to discover uncopyrightable ideas and methods of operation, see 17 U.S.C. § 102(b) (1994); *Sega Enters., Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992).

²⁸ See 17 U.S.C. § 107; see also, e.g., Paul Goldstein, *Copyright's Highway: The Law and Lore of Copyright from Gutenberg to the Celestial Jukebox* 170, 224 (1994); Bell, *supra* note 5; Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors*, 82 *Colum. L. Rev.* 1600 (1982); Robert P. Merges, *Are You Making Fun of Me? Notes on Market Failure and the Parody Defense in Copyright*, 21 *AIPLA Q.J.* 305 (1993).

²⁹ See *Princeton Univ. Press, Inc., v. Michigan Document Serv., Inc.*, 99 F.3d 1381 (6th Cir. 1996) (en banc) (photocopying for classroom use); *American Geophysical Union v. Texaco, Inc.*, 60 F.3d 913 (2d Cir. 1994) (photocopying for research use); Goldstein, *supra* note 28, at 178-79, 202, 216-24; Richard P. Adelstein & Steven I. Peretz, *The Competition of Technologies in Markets for Ideas: Copyright and Fair Use in Evolutionary Perspective*, 5 *Intl. Rev. L. & Econ.* 209 (1985); Bell, *supra* note 5, at 581-84; Gordon, *supra* note 28, at 1619-21; Merges, *The End of Friction?*, *supra* note 5, at 130-34; Stefik, *Shifting the Possible*, *supra* note 24, at 146-47; see also Fisher, *supra* note 26, at 1669-72 (observing that a broadly-inclusive approach to the market- impact inquiry "will almost always tilt in favor of the plaintiff").

has expired.³⁰ Digital CMS also will allow copyright owners who desire it to abrogate fair use entirely--for example, by requiring payment for any excerpting of a digital work regardless of the reader's purpose, or by conditioning access to the work on acceptance of a contractual provision prohibiting parodies.³¹ Finally, copyright owners will be able to implement contractual restrictions prohibiting reuse of the ideas, facts, or functional principles contained in a work--all elements that copyright law expressly leaves unprotected in order to stimulate further creativity--or prohibiting reuse of formerly copyrighted expression that has fallen into the public domain.³²

Copyright owners maintain that different rules are necessary in cyberspace because, absent technological protection, it is so easy to make and distribute unauthorized copies of digital content. Rules that undermine their control over their creative property, it is argued, will reduce, or even destroy, their incentives to distribute creative works digitally.³³ Sounding uncannily like the Supreme Court of the *Lochner* era, copyright owners and their supporters contend that translating public-law doctrines that benefit users, such as first sale and fair use, to the digital environment would require them to subsidize the reading public.³⁴

³⁰ See 17 U.S.C. § 109(a); Burns, *supra* note 5, at 34-35; Stefik, *Shifting the Possible*, *supra* note 24, at 145-46. But see *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970 (4th Cir. 1990) (holding that attempted contractual extension of copyright term was misuse and rendered copyright unenforceable); *infra* note 84 (discussing application of copyright misuse doctrine to digital CMS practices).

³¹ See 17 U.S.C. § 107; Cohen, *supra* note 9, at 175-78, 179-83.

³² See 17 U.S.C. § 102(b); *Feist Pubs., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991); Cohen, *supra* note 9, at 175-78, 179-83; see also Litman, *supra* note 6 (elaborating the role of a robust public domain in providing the building blocks for ongoing creative progress).

³³ See, e.g., WIPO Copyright Treaties Implementation Act; and Online Copyright Liability Limitation Act: Hearing on H.R. 2281 and H.R. 2280 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary, 105th Cong. 224-27 (1997) [hereinafter *Hearing on H.R. 2281 and 2280*]; *id.* at 204-12 (statement of Allan R. Adler, Vice-President for Legal and Governmental Affairs, Association of American Publishers); *id.* at 68-77 (statement of Robert W. Holleyman II, President, Business Software Alliance); *id.* at 212-16 (statement of Gail Markels, General Counsel and Senior Vice-President, Interactive Digital Software Association); *id.* (statement of Tom Ryan, CEO, SciTech Software, Inc., on behalf of the Software Publishers' Association); *id.* at 156-61 (statement of Allee Willis, songwriter, on behalf of Broadcast Music, Inc.); National Information Infrastructure Copyright Protection Act of 1995: Hearing on S. 1284 Before the Senate Comm. on the Judiciary, 104th Cong. 7-15 (1996) [hereinafter *Hearing on S. 1284*] (statement of Kenneth R. Kay, Executive Director, Creative Incentive Coalition); NII Copyright Protection Act of 1995: Hearings on H.R. 2441 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary, 104th Cong. 180-203 (1996) [hereinafter *Hearings on H.R. 2441*]; *id.* at 69-79 (statement of Barbara A. Munder, Senior Vice-President, The McGraw-Hill Cos.); *id.* at 25-30 (statement of Frances W. Preston, President and CEO, Broadcast Music, Inc.); *id.* (statement of Richard Robinson, Chairman, President, and CEO, Scholastic, Inc., on behalf of the Association of American Publishers); *id.* at 21-24 (statement of Jack Valenti, Chairman and CEO, Motion Picture Association of America, Inc.); Creative Incentive Coalition, *Resources: Key Questions Answered* (visited Sept. 27, 1998) <<http://www.cic.org/resources/faq.htm>>; NII White Paper, *supra* note 9, at 10-12, 177-78, 230.

³⁴ Compare NII White Paper, *supra* note 9, at 84 ("The Working Group rejects the notion that copyright owners should be taxed--apart from all others--to facilitate the legitimate goal of 'universal access.'"), and *Merges, The End of Friction?*, *supra* note 5, at 134-35 (characterizing the fair use doctrine as essentially redistributive), with *Adkins v. Children's Hosp.*, 261 U.S. 525, 557 (1923) (describing a minimum wage statute as "a compulsory exaction from the employer for the support of a partially indigent person, for whose condition there rests upon him no peculiar responsibility"); see also Gordon, *supra* note 28, at 1632 (applying the "subsidy" label to judicially-decreed findings of fair use where licensing theoretically would be possible); cf. Jane C. Ginsburg, *Authors and Users in Copyright*, 45 *J. Copyright Socy.* 1, 15 (1997) (arguing that fair use redistributes

Given the foregoing, one might expect that copyright owners would look to Lockean intellectual property theorists to support their claims to broad rights management authority. Although the Constitution expressly authorizes only a limited grant of exclusive (i.e., property-like) rights to authors, the Enlightenment notion that property and contract predate the social contract might nonetheless prove useful to those copyright owners seeking greater control over their digital content than current copyright law allows. In fact, although some scholars have advanced a Lockean justification for intellectual property rights, they have interpreted the Lockean proviso that "enough and as good [be left] for others" to require a robust public domain and a copyright grant that is limited both in duration and in scope.³⁵ In contrast, it is intellectual property scholars of the neoclassicist economic persuasion who express the strongest and most unequivocal support for digital copyright management regimes based on private-law contract and property rights.³⁶

value "from those who purchase copyrighted works at full price"). Section II.B.2, *infra*, demonstrates that the argument from redistribution is misguided because it assumes the central point in dispute: that the copyright owner was entitled to expect remuneration for the use in question. Regarding Ginsburg's injured purchasers, see *infra* text accompanying notes 335-42 (discussing the public good aspect of the fair use privilege).

³⁵ See, e.g., Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 *Yale L.J.* 1533, 1560-72 (1993) (quoting and discussing Locke, *supra* note 18, at bk. II, § 27); Justin Hughes, *The Philosophy of Intellectual Property*, 77 *Geo. L.J.* 287, 319-25 (1988); cf. Joan E. Schaffner, *Patent Preemption Unlocked*, 1995 *Wis. L. Rev.* 1081, 1094-95 (advancing similar interpretation to explain limitations on patent duration and scope).

³⁶ Neoclassical economic theory, closely associated with the Chicago school of legal-economic thought, holds (among other things) that society is composed of rational, utility-maximizing individuals; that these individuals will seek to better their positions through voluntary market exchange as long as the marginal benefit outweighs the marginal cost; that the most reliable measure of expected utility is the amount an individual is willing to pay for a particular exchange; that perfectly competitive markets are the most efficient vehicles for coordinating these wealth-maximizing exchanges; that perfectly competitive markets will seek equilibrium as prices respond to the laws of supply and demand; and that markets are presumptively perfectly, or near-enough-perfectly, competitive. See Nicholas Mercurio & Steven G. Medema, *Economics and the Law: From Posner to Post-Modernism* 13-18, 57-60 (1997); see also Robert A. Solo, *Neoclassical Economics in Perspective*, in *The Chicago School of Political Economy* 41, 48-55 (Warren J. Samuels ed., 1993); *infra* text accompanying note 206 (discussing additional elements of the neoclassical model). Numerous critics within both economics and law have charged that the neoclassical market model, while possessed of considerable theoretical elegance, is descriptively inadequate and institutionally myopic. For representative critiques from within the discipline of economics, see, for example, Daniel W. Bromley, *Economic Interests and Institutions: The Conceptual Foundations of Public Policy* (1989); Ezra J. Mishan, *The Folklore of the Market: An Inquiry Into the Economic Doctrines of the Chicago School*, in *The Chicago School of Political Economy*, *supra*, at 95; Warren J. Samuels, *Welfare Economics, Power, and Property*, in *Law and Economics: An Institutional Perspective* 9 (Warren J. Samuels & A. Allen Schmid eds., 1981); [hereinafter Samuels, *Welfare Economics*]; Warren J. Samuels, *Further Limits to Chicago School Doctrine*, in *The Chicago School of Political Economy* [hereinafter Samuels, *Further Limits*], *supra*, at 397; Solo, *supra*, at 48-55; Charles K. Wilber & Jon D. Wisman, *The Chicago School: Positivism or Ideal Type*, in *The Chicago School of Political Economy*, *supra*, at 79; see generally Mercurio & Medema, *supra* (describing the various schools of legal-economic thought). Foundational critiques by legal academics include C. Edwin Baker, *The Ideology of the Economic Analysis of Law*, 5 *Phil. & Pub. Aff.* 3, 32-41 (1975), Mark Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 *S. Cal. L. Rev.* 669 (1979), Duncan Kennedy & Frank Michelman, *Are Property and Contract Efficient?*, 8 *Hofstra L. Rev.* 711 (1980), and Arthur Allen Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 *Va. L. Rev.* 451 (1974).

Neoclassically-grounded legal scholars' strong predisposition toward the use of private-law models for intellectual property rights is evident in other areas of intellectual property law as well. See, e.g., Frank H. Easterbrook, *Intellectual Property Is Still Property*, 13 *Harv. J.L. & Pub. Poly.* 108 (1990); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 *J.L. & Econ.* 265 (1977); see generally Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 *Texas L. Rev.* 873, 896- 98 (1997) (reviewing James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* (1996)) ("The rise of property rhetoric in intellectual property cases is closely identified ... with a particular economic view of

Both Maureen O'Rourke and Tom W. Bell see contract as presumptively more efficient than copyright at promoting the dissemination of creative works. Just as the Lochner-era Court reasoned that private ordering would benefit workers by leaving them free to bargain for the employment terms of their choice,³⁷ O'Rourke and Bell argue that the shift to a contract-based "usage rights" regime will benefit information consumers by increasing their access to digital works and reducing the costs of such access. O'Rourke suggests that these savings will accrue as the result of price discrimination; content owners will charge private individuals lower rates in exchange for subjecting them to use restrictions.³⁸ She further suggests that, particularly when copyright protection is thin or unavailable, the option of using contract to recoup initial investment in information products may be the decisive factor in ensuring that a work is produced and placed on the market.³⁹

Taking a different approach, Bell attempts to show that the fair use exception to the exclusive rights afforded by copyright is more expensive, and therefore inefficient, than consumers realize. He argues that information is never truly free; rather, a would-be user of copyrighted material must incur search costs to find material, exchange costs if she decides a license is necessary, and uncertainty costs if she decides it is not. Digital networks and CMS technologies minimize the first two categories of costs and eliminate the

property rights."). As Part II discusses--and as the discussion of Lochner-era beliefs about "class" legislation, see *supra* text accompanying notes 18-23, also suggests--the convergence of neoclassical "law and economics" and Lockean social contract theory is no coincidence; despite its claims to quasi-scientific neutrality, the neoclassically-grounded economic approach to copyright law practiced by the cybereconomists is firmly rooted in a particular ideology of social ordering. See also Hadfield, *supra* note 26, at 41-45 (observing that one school of economic thought about copyright "tracks the complete property aspect of the natural rights rationale"); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 *Yale L.J.* 283, 310 n.109 (1996) (noting the convergence between economic and natural rights-based justifications for copyright); see generally Baker, *supra*, at 33 (discussing the convergence of utilitarian and libertarian justifications for market ordering); H.H. Liebhafsky, *Price Theory as Jurisprudence: Law and Economics, Chicago Style*, in *The Chicago School of Political Economy*, *supra*, at 237, 239-40 ("The Chicago 'price theory as jurisprudence' approach is a curious mixture, not a compound, of particles of logical positivist methodology suspended randomly in a mythical or secular natural law philosophy."); Solo, *supra*, at 42-47, 45 ("[T]he economist acts the part of the pure scientist, but he plays the role of a moral philosopher. His value judgments are not purged, but hidden.").

As used in this Article, "neoclassical," "neoclassicist," and "neoclassically-grounded" encompass economic approaches based on offshoots of neoclassical theory, including "neoinstitutional" economics, see *infra* note 50, and neoclassical market theory as modified by the Hayekian model of dynamic competition, see, e.g., Linda A. Schwarzstein, *An Austrian Economic View of Legal Process*, 55 *Ohio St. L.J.* 1049 (1994).

³⁷ See, e.g., *Lochner v. New York*, 198 U.S. 45, 52-53 (1905); *Adkins v. Children's Hosp.*, 261 U.S. 525, 545-46 (1923).

³⁸ See O'Rourke, *Copyright Preemption*, *supra* note 5, at 62, 70-71; cf. William W. Fisher III, *Property and Contract on the Internet*, 74 *Chi.-Kent L. Rev.* (forthcoming 1998) (demonstrating how price discrimination can allow copyright owners to increase their overall profits while charging discount prices to certain consumers); Michael J. Meurer, *Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works*, 45 *Buff. L. Rev.* 845 (1997) (same).

³⁹ See O'Rourke, *Copyright Preemption*, *supra* note 5, at 79 (describing the "freedom of contract" approach to copyright preemption issues); *id.* at 81- 91 (endorsing a predominantly market-based solution to the copyright preemption problem). Copyright protection for a work is described as "thin" when the work consists primarily of uncopyrightable elements such as facts, ideas, and methods of operation, which competitors are free to copy. See 17 U.S.C. § 102(b) (1994); *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991).

last; the result, Bell contends, is better for everyone.⁴⁰ As he puts it, "[a]lthough consumers might have to pay fees that the fair use defense would excuse in other media, they would in return gain better access to better information."⁴¹ He further argues that the increased value realized by copyright owners as a result of usage fees will be passed on to consumers as publishers compete to market their products.⁴²

Trotter Hardy takes the arguments made by O'Rourke and Bell even farther. While both Bell and O'Rourke would retain copyright as a source of default legal rules,⁴³ Hardy argues that (at least in cyberspace) copyright should be abandoned altogether in favor of strong, undivided property entitlements.⁴⁴ Just as the Lochner-era Court reasoned that minimum wage laws "amount[] to a compulsory exaction from the employer,"⁴⁵ Hardy believes that the public law of copyright imposes unnecessary transaction costs and uncompensated positive externalities on copyright owners, thereby undermining incentives to produce creative works.⁴⁶ Drawing on the work of Harold Demsetz and Robert Ellickson, Hardy argues that the system of public entitlements established by current copyright law may be conceived as a form of common ownership.⁴⁷ Because the new rights management technologies make it relatively inexpensive to

⁴⁰ See Bell, *supra* note 5, at 580-81, 585-88. As Bradford DeLong and Michael Fromkin demonstrate, in the current digital environment the assumption that digital networks will invariably reduce search and exchange costs is highly problematic. See J. Bradford DeLong & A. Michael Fromkin, *The Next Economy?*, in *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property* (Deborah Hurley et al. eds., forthcoming 1998) (last modified Apr. 11, 1997) (available at <<http://www.law.miami.edu/~froomkin/articles/newecon.htm>>); see also Merges, *The End of Friction?*, *supra* note 5, at 116 (characterizing the assumption of lowered transaction costs as an "oversimplification"); Dan L. Burk, *Muddy Rules for Cyberspace* 18- 20 (1997) (unpublished manuscript, on file with author); *infra* text accompanying note 148. However, the Digital Object Identifier (DOI) project, if successful, may reduce search costs substantially for many creative and informational works. The project, begun in 1994 by the Association of American Publishers to design and implement a system for assigning unique digital identifiers to digital works and maintaining a centralized database to serve as a locator, is currently in the startup stage. See Bill Rosenblatt, *The Digital Object Identifier: Solving the Dilemma of Copyright Protection Online*, 3 *J. Electronic Publishing* (Dec. 1997) <<http://www.press.umich.edu/jep/03-02/doi.html>>; Digital Object Identifier Foundation, *Digital Object Identifier System* (visited Nov. 4, 1998) <<http://www.doi.org>>. The DOI technology is designed to operate at the publisher's desired level of granularity; sections or components of works may each have their own unique identifier if the publisher chooses. See Paula Berinstein, *DOI: A New Identifier for Digital Content* (visited Oct. 10, 1998) <<http://www.infoday.com/searcher/jan/story4.html>>.

⁴¹ Bell, *supra* note 5, at 561.

⁴² See *id.* at 588-89.

⁴³ But see *id.*, at 615-17 (suggesting that copyright owners who choose to contract around these default rules could be required to forego copyright remedies in the event of breach).

⁴⁴ See Hardy, *supra* note 5. Elsewhere, Hardy has argued that strong entitlements are what the framers of the Constitution envisioned. See I. Trotter Hardy, *Contracts, Copyright and Preemption in a Digital World*, 1 *Rich. J.L. & Tech.* 2, P 37 (1995) <<http://www.urich.edu/~jolt/v1i1/hardy.html>>. As discussed *infra* note 154, I disagree with his interpretation.

⁴⁵ See *Adkins v. Children's Hosp.*, 261 U.S. 525, 557 (1923).

⁴⁶ See Hardy, *supra* note 5, at 254-58; I. Trotter Hardy, *The Proper Legal Regime for "Cyberspace,"* 55 *U. Pitt. L. Rev.* 993, 1025-26 (1994) [[[hereinafter Hardy, *Proper Legal Regime*]].

⁴⁷ See Hardy, *supra* note 5, at 252-54 (citing Harold Demsetz, *Toward A Theory of Property Rights*, 57 *Am. Econ. Rev.* 347, 347-48 (1967), and Robert C. Ellickson, *Property in Land*, 102 *Yale L.J.* 1315, 1348-49 (1993)); see also Adelstein & Peretz, *supra* note 29, at 212-15.

set and police the boundaries of digital intellectual property, and because the ongoing public process of copyright lawmaking is so cumbersome and costly, he asserts that pure private ownership would be a more efficient method of managing our culture's creative resources.⁴⁸

Robert Merges's work attempts to bridge the no-man's-land between neoclassically-grounded cybereconomists like Hardy or Bell, on the one hand, and copyright scholars who prefer a public-law approach (those who, for example, see a role for fair use beyond market failure) on the other.⁴⁹ Merges analyzes private ordering in the market for digital works at both transactional and institutional levels. Borrowing from an offshoot of neoclassical economic theory called neoinstitutional economics,⁵⁰ he posits that copyright owners, if left to their own devices, will develop efficient collective institutions for valuing, managing, and licensing their intellectual property rights.⁵¹ These voluntarily constituted "collective rights organizations" will develop procedures for pricing the rights they administer and remitting royalties to members, and will "present a simple, coherent menu of prices and other terms to licensees."⁵²

Merges argues that government is inherently ill-equipped to undertake these tasks, because it has no reliable means of valuing intellectual property, because legislated license terms are comparatively inflexible, and because the legislative process is subject to capture by interest groups.⁵³ Moreover, he believes that the licenses administered by collective rights organizations will be "closely akin" to compulsory licenses, in that they will be available to anyone willing to pay the required price and accept the required terms.⁵⁴ Thus,

⁴⁸ See Hardy, *supra* note 5, at 242-52, 254-60.

⁴⁹ These are the scholars whom O'Rourke describes as adhering to a "public domain" view of copyright rather than a "freedom of contract" view. See O'Rourke, *Copyright Preemption*, *supra* note 5, at 78-79; see also, e.g., Julie E. Cohen, *Copyright and the Jurisprudence of Self-Help*, 13 *Berkeley Tech. L.J.* 1089 (1998); Elkin-Koren, *supra* note 6; Paul J. Heald, *Reviving the Rhetoric of the Public Interest: Choir Directors, Copy Machines, and New Arrangements of Public Domain Music*, 46 *Duke L.J.* 241 (1996); Kreiss, *supra* note 6; David Lange, *Recognizing the Public Domain*, 44 *Law & Contemp. Probs.*, Autumn 1981, at 147; Jessica Litman, *Revising Copyright Law for the Information Age*, 75 *Or. L. Rev.* 19 (1996) [hereinafter Litman, *Revising Copyright Law*]; Litman, *supra* note 6; Michael J. Madison, "Legal-Ware": Contract and Copyright in the Digital Age, 67 *Fordham L. Rev.* (forthcoming 1998); Netanel, *supra* note 36; L. Ray Patterson, *Free Speech, Copyright, and Fair Use*, 40 *Vand. L. Rev.* 1 (1987); Samuelson, *supra* note 9, at 134. O'Rourke's more recent work aligns her more closely with Merges in this respect. See Maureen A. O'Rourke, *Fencing Cyberspace: Drawing Borders in a Virtual World*, 82 *Minn. L. Rev.* 609, 695-97 (1998).

⁵⁰ Historians of economics have identified two "new" institutionalist schools of thought. See, e.g., Thrainn Eggertson, *Economic Behavior and Institutions* 5-9 (1990). As defined by Eggertson, "new institutional" theorists reject the core principles of the neoclassical economic model--"stable preferences, the rational-choice model, and equilibria"--while "neoinstitutional" theorists retain the neoclassical core. See *id.* at 5-6; see *supra* note 36; see also Mercurio & Medema, *supra* note 36, at 101-56 (differentiating between "institutional" and "neoinstitutional" schools); cf. Netanel, *supra* note 36, at 312-13 (discussing areas of commonality between neoclassical and "new institutional" economics, without distinguishing among schools of institutionalist thought). Merges does not appear to recognize this distinction, but cites theorists from both schools. However, his analysis of the appropriate legal regime for rights in digital works is predominantly neoclassical in orientation. See *infra* text accompanying notes 133-53.

⁵¹ See Merges, *Contracting Into Liability Rules*, *supra* note 5.

⁵² *Id.* at 1328.

⁵³ See *id.* at 1308-17.

⁵⁴ See *id.* at 1328.

he concludes that legislated compulsory licensing of digital information--in other words, replacement of copyright owners' current property entitlements with liability rules--is neither desirable nor necessary. Merges further argues that many, if not most, contractual extensions of copyright are "relatively benign."⁵⁵ It follows that copyright owners ordinarily "should be free to craft contracts as they see fit."⁵⁶

Both Merges and O'Rourke are troubled by the vanishing role of fair use in digital media, however. Merges's proposed solution, viewed through the prism of *Lochner*, is an interesting one: He suggests expressly acknowledging fair use as a redistributive measure, and legislatively exempting certain classes of users from generally applicable market-driven rules.⁵⁷ This suggestion is reminiscent of the *Lochner* Court's "wards of the state" reasoning; it reads as though Merges is attempting to reconcile his clear feeling that some exception is needed with an unspoken intuition that an exception articulated in doctrinal terms may bring down the entire market-based edifice. Far better, under the circumstances, to single out classes of users and leave the topic of privileged uses unbroached. Moreover, it appears that both Merges and O'Rourke would enforce contractual waivers by privileged users in most cases.⁵⁸

O'Rourke, Bell, and Merges differ as to whether and when public policy might be permitted to override private contractual ordering of rights in digital works.⁵⁹ For Bell, the answer appears to be that courts and legislators should intervene in the market only in cases that meet the stringent common law standard of unconscionability.⁶⁰ O'Rourke and Merges stake out a position that is slightly more complicated. Both believe that, in the context of the consumer mass market, unconscionability may inhere in particular contract terms that are so pervasive as to amount to private legislation.⁶¹ However, they would find this condition satisfied, and allow courts to invalidate such terms, only if the copyright owner or group of copyright

⁵⁵ Merges, *The End of Friction?*, supra note 5, at 126.

⁵⁶ *Id.*

⁵⁷ See *id.* at 134-35; see also O'Rourke, supra note 49, at 696 (approving Merges's suggestion as applied to Internet hyperlinks, and suggesting that the choice of redistributive exceptions be informed by non-economic considerations).

⁵⁸ See Merges, *The End of Friction?*, supra note 5, at 126-27; O'Rourke, *Copyright Preemption*, supra note 5, at 83-87 (proposing criteria of disclosure and market-measured "reasonableness" for enforcement of standard form contract provisions that conflict with copyright).

⁵⁹ Hardy does not address this question.

⁶⁰ See Bell, supra note 5, at 591, 607 & n.222; see infra note 75. Bell appears to reserve judgment on whether there might be a role for public policy once the market has reached a consensus as to the optimal type(s) of contract. See *id.* at 614-17.

⁶¹ See Merges, *The End of Friction?*, supra note 5, at 126; O'Rourke, *Copyright Preemption*, supra note 5, at 80. Indeed, the characterization of non-negotiable and essentially uniform mass-market license terms restricting use of intellectual property as "private legislation" originates with Merges. See Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 *Mich. L. Rev.* 1570, 1611-13 (1995) (book review) (citing Friedrich Kessler, *Contracts of Adhesion--Some Thoughts About Freedom of Contract*, 43 *Colum. L. Rev.* 629 (1943)). However, Merges's current approach to determining when standard form contract terms fall within this category is highly restrictive. See Merges, supra, at 1612-13; infra text accompanying notes 223-26, 260-62. For further discussion of the "private legislation" approach to standard form contracts generally, see infra note 79.

owners has antitrust market power.⁶² In addition, O'Rourke offers qualified support for a rule requiring conspicuous disclosure of contract terms that diverge from copyright.⁶³

In sum, the world envisioned by copyright owners and by the new breed of "cybereconomists" looks a great deal like the one implicit in the pronouncements of the pre-New Deal Supreme Court. Private ordering is paramount, and restrictions imposed by the public law--whether based on concerns of health and safety or those of access and fair use--are few and narrowly cabined to avoid concerns about impermissible wealth redistribution and distortion of "natural" market outcomes. The difference is that the philosopher's "is" has become the engineer's "ought" backed up with the prescriptive force of rationality. Judicially decreed immutable principles of social ordering have given way to assertedly objective application of economic laws to plot the optimal trajectory for legal change. Of critical importance, then, is whether the proffered models for managing rights in digital works are as comparatively efficient as they purport to be. I turn now to that question.

II. The New Conceptualism

The cybereconomists present their private-law models for digital property rights as the logical products of neutral, incontestable axioms. Upon closer inspection, however, the economic arguments they assert are neither especially neutral nor particularly compelling. Rather, they embody a socially determined "natural law" of the market that takes the private-law institutions of property and contract as exogenous. Although the conceptualism of the *Lochner* era no longer dominates legal thought, the mode of economic analysis practiced by the cybereconomists, and implicit in the arguments offered by copyright owners to support strengthening their proprietary rights, rests upon a conceptualism of a different sort. "Contract," "market," and "property"--the efficient building blocks of the new social order--have talismanic significance, with the result that private-law forms of regulation are advocated absent any proof that they would produce the best regime, or even a good one, for disseminating information and promoting ongoing creative progress.⁶⁴

This Part examines the economic arguments for a private-law approach to digital intellectual property, and

⁶² See Merges, *The End of Friction?*, supra note 5, at 126; O'Rourke, *Drawing the Boundary*, supra note 5, at 541-55; see also O'Rourke, *Copyright Preemption*, supra note 5, at 82-84, 88-89 (suggesting that a mass-market license term that conflicts with copyright could be held invalid if it is not "reasonable" given market conditions). In contrast, Bell argues that even if a copyright owner is shown to have market power, its use of digital CMS will still produce efficiency gains for the public. See Bell, supra note 5, at 588- 89 n.142.

⁶³ See O'Rourke, *Copyright Preemption*, supra note 5, at 83-87. The current trend is against requiring such disclosure. See infra text accompanying note 87 (discussing the approach to disclosure of contract terms taken by proposed UCC Article 2B).

⁶⁴ Cf. Margaret Jane Radin, *Contested Commodities* 31-34 (1996) (suggesting that conceptualism about "property" leads both logically and rhetorically toward acceptance of universal commodification); Pierre Schlag, *An Appreciative Comment on Coase's The Problem of Social Cost: A View from the Left*, 1986 *Wis. L. Rev.* 919, 933-45 (arguing that the "law and economics" movement has adapted Coase's vocabulary and analytical tools to serve its own normative and political ends).

finds them unconvincing. Section II.A scrutinizes the cybereconomists' claims about the presumptive efficiency of contract as a vehicle for allocating rights in digital works. It concludes that the existing consumer mass market fails to satisfy the cybereconomists' own criteria for efficiency, and that they have not provided us with any meaningful way of comparing the existing, demonstrably imperfect market with the concededly imperfect legislative process. Section II.B examines their arguments about the importance of private-law property rights and rules, and concludes that they fail to prove that strong property rights will maximize digital works' value to society. To the contrary, evaluation of the cybereconomists' arguments about value maximization in the context of creative and informational works suggests that a limited-entitlements regime is likely to be more effective.

A. Constructing Consent

The cybereconomists' belief in the superiority of contract for allocating usage rights in digital works rests on two points. First, they argue that granting more control to the purveyors of digital works will make creative and informational works more accessible in the long run (which, it is assumed, will result in more progress) as the natural result of competition in the consumer market.⁶⁵ Second, they assert that the legislative process is comparatively unsuited to accomplish these ends because it is coercive and controlled by special interests.⁶⁶ Neither of these points survives more thorough scrutiny. Even assuming that a market based on voluntary, informed bargaining over rights in digital works would work as the cybereconomists say it would,⁶⁷ the conditions for such bargaining do not exist in the market we have. As a result, it is impossible to say with certainty that the market would be better at promoting access and progress than the existing system of public ordering via the legislative process.

Two fundamental requirements of the neoclassical model of social ordering through private exchange are knowledge of contract terms and meaningful (i.e., voluntary and fully informed) assent.⁶⁸ Both are necessary (though not sufficient) requirements for an "unregulated" market to reach the efficient equilibrium

⁶⁵ See Bell, *supra* note 5, at 587-90, 601-08; Hardy, *supra* note 5, at 236-60; Merges, Contracting into Liability Rules, *supra* note 5, at 1328; O'Rourke, Copyright Preemption, *supra* note 5, at 81-87; see also Merges, The End of Friction?, *supra* note 5, at 120-28; see generally Lemley, *supra* note 6, at 1044-47 (delineating Chicago school argument that the market will promote creative progress by allocating improvement rights to those who value them most highly); Netanel, *supra* note 36, at 321-24 (describing neoclassically-oriented theorists' commitment to "legal marginalism").

⁶⁶ See Bell, *supra* note 5, at 607-08; Hardy, *supra* note 5, at 254- 58; Merges, Contracting Into Liability Rules, *supra* note 5, at 1308-17.

⁶⁷ This is an extremely charitable assumption. As discussed further in section II.B, *infra*, there is no particular reason to believe that creative ability will always correlate with ability to pay market price for improvement rights, or that owners will be equally willing to license all types of improvements. See also Lemley, *supra* note 6, at 1048-61; Merges, Are You Making Fun of Me?, *supra* note 28 (acknowledging that market approach may not work well for parodies).

⁶⁸ See Cooter & Ulen, *supra* note 25, at 186-93.

point; the absence of either or both may signal a market failure justifying some form of adjustment.⁶⁹ Under the proposed digital CMS regime, however, consumer transactions relating to digital works will bear little resemblance to the paradigmatic bargained-for exchange. Instead, much like the typical software purchase today, they will be governed by standard form "licenses" that include provisions regarding permissible and impermissible uses.⁷⁰ Digital CMS enable the use of such "click-through" contracts to require acceptance of usage restrictions for any type of work that is made available online.⁷¹ A critical question is whether this sort of transaction, in aggregate, can or will produce the near-perfect, self-equilibrating market that, for the neoclassically-grounded economist, constitutes the pinnacle of social ordering. Merges does not address this question; O'Rourke, Bell, and Hardy use specious logic to evade it.

One does not need to be a neoclassical economist to understand that requiring individual negotiation of every term in a consumer contract would be prohibitively expensive. This is precisely the sort of problem

⁶⁹ See *id.*; Guido Calabresi & A. Douglas Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 Harv. L. Rev. 1089, 1111 (1972); Elkin-Koren, *supra* note 6, at 108; see also *supra* note 25 (defining "market failure"). Other requirements include rational, utility-maximizing parties, zero transaction costs, perfect information, and a sufficiently large number of buyers and sellers that no party has market power. See Cooter & Ulen, *supra* note 25, at 186-93; see also *supra* note 36.

⁷⁰ See, e.g., Clark, *supra* note 5, at 99; NII White Paper, *supra* note 9, at 51, 58-59; see also O'Rourke, Drawing the Boundary, *supra* note 5, at 487-95 (discussing typical software license terms); David A. Rice, Public Goods, Private Contract Prohibitions and Public Policy: Federal Preemption of Software License Provisions Against Reverse Engineering, 53 U. Pitt. L. Rev. 543, 552-67 (1992) [hereinafter Rice, Public Goods] (same).

The application of "license" terminology to digital works is contested. In the nondigital world, the purchaser of a book does not assume ongoing contractual obligations; quite the opposite. Under copyright law, the initial sale of a copy embodying the copyrighted work exhausts the owner's rights to control the use or disposition of that copy. See 17 U.S.C. § 109(a) (1994); *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 349-51 (1907). To avoid the first sale doctrine, software developers have attempted to characterize the initial transaction as a license of usage rights rather than a sale. See, e.g., O'Rourke, Drawing the Boundary, *supra* note 5, at 487-95; Rice, Public Goods, *supra*, at 552-67; David A. Rice, Digital Information as Property and Product: U.C.C. Article 2B, 22 U. Dayton L. Rev. 621, 624-26, 632-34 (1997) [hereinafter Rice, Digital Information]. Taking their cue from software developers, major copyright owners' associations and developers of digital CMS have adopted licensing terminology as the frame of reference for transactions in digital works. See, e.g., Clark, *supra* note 5, at 99; Gervais, From Rights Trading to Electronic Publishing, *supra* note 24; see also Madison, *supra* note 49 (manuscript at 36-60) (describing the increasing prevalence of "shrinkwrap" licensing practices, both among software developers and among publishers of more traditional works). Most courts, however, have preferred to apply a functional test that asks whether the transaction looks like a one-time sale of a copy, despite assertions that one party intended it to create an ongoing relationship. See, e.g., *Step-Saver Data Sys., Inc. v. Wyse Techs.*, 939 F.2d 91, 98-100 (3d Cir. 1991); *Arizona Retail Sys. v. Software Link, Inc.*, 831 F. Supp. 759, 762-66 (D. Ariz. 1993); Mark A. Lemley, Intellectual Property and Shrinkwrap Licenses, 68 S. Cal. L. Rev. 1239, 1244 n.23 (1995) (collecting cases). But see *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996) (Easterbrook, J.) (holding shrinkwrap license terms that restricted ongoing use of product enforceable); *Hill v. Gateway 2000, Inc.*, 105 F.3d 1147 (7th Cir. 1997) (Easterbrook, J.) (same). The forthcoming Article 2B of the Uniform Commercial Code rejects the majority viewpoint and adopts Judge Easterbrook's, treating most shrinkwrap license terms as enforceable restrictions that render the consumer's use subject to the copyright owner's ongoing control. See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), *supra* note 24, at Preface, Pt. 2: Basic Themes; Rice, Digital Information, *supra*, at 629-31, 634-36.

⁷¹ See *supra* text accompanying notes 24-32.

that the Uniform Commercial Code was created to address.⁷² It does so by recognizing two categories of terms--roughly, more and less important ones--and by setting higher standards for disclosure of more important, or "material," terms.⁷³ Both types of terms are, however, presumptively enforceable if the applicable disclosure standards were met.⁷⁴ The UCC does authorize refusal to enforce terms that are unconscionable, but the threshold for unconscionability is high.⁷⁵ Although some courts and commentators have expressed doubt as to whether Article 2 of the current UCC applies to computer software sales, a new Article 2B is being drafted to cover transactions in intellectual property and other intangibles.⁷⁶ Thus, it seems likely that consumer transactions in digital works eventually will be governed by uniform provisions roughly analogous to those governing sales of goods.⁷⁷ For purposes of this discussion, the important thing

⁷² See Michael M. Greenfield, *The Role of Assent in Article 2 and Article 9*, 75 *Wash. U. L.Q.* 289, 290-93, 302-04 (1997); John E. Murray, Jr., *The Revision of Article 2: Romancing the Prism*, 35 *Wm. & Mary L. Rev.* 1447, 1453-56 (1994).

⁷³ See U.C.C. §§ 2-204, 2-207, 2-305 to -310, 2-314, 2-316 (1989).

⁷⁴ See U.C.C. § 2-316(2), (3)(a).

⁷⁵ See U.C.C. § 2-302 & cmt. 1 ("The principle is one of the prevention of oppression and unfair surprise, and not of disturbance of allocation of risks because of superior bargaining power." (citation omitted)); see, e.g., *Siemens Credit Corp. v. Newlands*, 905 F. Supp. 757, 765 (N.D. Cal. 1994) ("Even if a contract term fails the test of procedural unconscionability, an 'unbargained for' term will only be denied enforcement if it is also substantively unreasonable."); see also *Restatement (Second) of Contracts* § 208 cmt. b (characterizing unconscionable contract terms to be such "as no man in his senses and not under delusion would make on the one hand, and as no honest and fair man would accept on the other") (quoting *Hume v. United States*, 132 U.S. 406 (1889)).

⁷⁶ See, e.g., *NMP Corp. v. Parametric Tech. Corp.*, 958 F. Supp. 1536, 1542 (N.D. Okla. 1997); *Architectronics, Inc. v. Control Sys., Inc.*, 935 F. Supp. 425, 432 (S.D.N.Y. 1996); *In re Bedford Computer Corp.*, 62 B.R. 555, 566-67 (Bankr. D.N.H. 1986); Bonna Lynn Horovitz, Note, *Computer Software as a Good Under the Uniform Commercial Code: Taking a Byte out of the Intangibility Myth*, 65 *B.U. L. Rev.* 129 (1985). Many other courts have simply applied Article 2 to computer software cases. See sources cited *supra* note 70.

For the most recent draft of Article 2B, see <<http://www.law.upenn.edu/library/ulc/ulc.htm>>.

⁷⁷ The current draft of Article 2B is much less consumer-friendly than Article 2. See *infra* text accompanying note 87; see also Cohen, *supra* note 49, at 1096-1118; Memorandum from Profs. Jean Braucher and Peter Linzer to Members, American Law Institute (May 5, 1998) (available at <<http://www.ali.org/ali/braucher.htm>>) [hereinafter Braucher/Linzer Memorandum]. It is not entirely clear whether the current draft of Article 2B is the version that will be adopted. Originally, the draft was scheduled for a final vote by the National Council of Commissioners on Uniform State Laws (NCCUSL) at the NCCUSL's July 1998 annual meeting. However, the American Law Institute (ALI), which has the power of final approval, expressed serious reservations, as did many other commentators. See, e.g., Letter from Prof. Geoffrey C. Hazard, Jr., Director, ALI Ad Hoc Committee on Article 2B, to Gene N. Lebrun, President, NCCUSL, and Charles Alan Wright, President, ALI (Mar. 26, 1998) (available at <<http://www.2bguide.com/docs/ghmar98.html>>); Braucher/Linzer Memorandum, *supra*; David Nimmer et al., *The Metamorphosis of Contract Into Expand*, 87 *Calif. L. Rev.* 17 (1999); Pamela Samuelson, *Does Information Really Have to Be Licensed?*, 41 *Comm. ACM* 15 (Sept. 1998) <http://sims.berkeley.edu/~pam/papers/acm_2B.html>. In response to the criticism, the NCCUSL took the unusual step of agreeing to consider additional comments and proposals submitted within three months after the annual meeting. The drafting committee will meet again in November 1998 to consider whether additional revisions are warranted, and final votes by the NCCUSL and the ALI have been postponed until mid-1999. See American Law Institute, *Schedule of Adoption and Drafting Committee Meetings* (visited Nov. 4, 1998) <<http://www.2bguide.com/schedule.html>>. In addition, because much of the impetus for the current version of Article 2B has come from the computer software industry, some representatives of other copyright industries have suggested that the scope of Article 2B be narrowed to cover only computer software and electronic information products. See Letter from Simon Barsky, Senior Vice

to understand about the UCC is that it represents a regulatory solution to a perceived market failure, adopted in recognition that high transaction costs foreclosed the kind of particularized assent that both the law and neoclassical precepts required for a contract term to be enforceable.⁷⁸ The resulting market may or may not function efficiently as compared with other possible regimes, but it does not function according to the pure neoclassical model, and its constituent transactions cannot plausibly be described as fundamentally private.⁷⁹

How does copyright law interact with this state-based regulatory regime? Section 301 of the Copyright Act preempts state law rights that are "equivalent" to any of the exclusive rights afforded by copyright.⁸⁰

Although Congress's exact intent regarding section 301's effect on contract rights is uncertain, it seems clear that Congress did not intend the Copyright Act to displace state contract law generally.⁸¹ It seems equally certain, however, that Congress did not intend to allow the states to establish alternative, universally-applicable regimes of property-like protection for works falling within the subject matter of copyright.⁸² Moreover, even if Congress did so intend, the

President & General Counsel, Motion Picture Association, to Carlyle Ring, Jr., Chair, Article 2B Drafting Committee (Apr. 29, 1998) (available at <<http://www.SoftwareIndustry.org/issues/guide/docs/conn0429.html>>). As of this writing, the NCCUSL's response to this suggestion is unknown.

⁷⁸ See Greenfield, *supra* note 72, at 291-92, 302-14.

⁷⁹ Indeed, this is true of any socially-enforced regime of contract law. See Jean Braucher, *Contract Versus Contractarianism: The Regulatory Role of Contract Law*, 47 Wash. & Lee L. Rev. 697 (1990). It is particularly true of mass-market, standard form contracts, however. Scholars within the fields of both law and economics have characterized the standard form contracts that the UCC enables as "private legislation"--de facto legislation produced by private firms pursuant to a delegation of authority from the state, via the legal rules governing the formation and enforceability of such contracts. See Victor P. Goldberg, *Institutional Change and the Quasi-Invisible Hand*, 17 J.L. & Econ. 461, 468 n.15, 484-91 (1974); Friedrich Kessler, *Contracts of Adhesion--Some Thoughts About Freedom of Contract*, 43 Colum. L. Rev. 629 (1943); W. David Slawson, *Standard Form Contracts and Democratic Control of Law-Making Power*, 84 Harv. L. Rev. 529, 538-42 (1971); see also Samuels, *Further Limits*, *supra* note 36, at 397, 438-39. Goldberg observes that such contracts also can be characterized--perhaps more palatably for those of a neoclassical bent--as the result of investments in the political/legislative arena by firms, "for the purpose of keeping certain activities (that is, those covered by standard form contracts) in the private market arena." Goldberg, *supra*, at 484 n.49; see also *infra* text accompanying notes 253-70 (considering the interplay between private interests and legal institutions in determining the rules that govern mass-market contracts). Merges recognizes the private legislation dynamic, but contends that contract terms do not attain this status unless their purveyor has market power. See Merges, *supra* note 61, at 1612-13; Merges, *The End of Friction?*, *supra* note 5, at 126; *supra* note 61. As discussed *infra* text accompanying notes 253-59, however, the private legislation dynamic does not require market power.

⁸⁰ See 17 U.S.C. § 301(a) (1994).

⁸¹ See 17 U.S.C. § 301(b); H.R. Rep. No. 94-1476, at 132 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5747-48; Lemley, *supra* note 70, at 1282; Rice, *Public Goods*, *supra* note 70, at 602-04.

⁸² See H.R. Rep. No. 94-1476, at 130-32, reprinted in 1976 U.S.C.C.A.N. at 5745-48; Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. Dayton L. Rev. 511, 524, 527-28, 537-39 (1997); Lemley, *supra* note 70, at 1282-83; Rice, *Public Goods*, *supra* note 70, at 603, 607. For this reason, a work need not actually be copyrightable to fall within the subject matter of copyright for purposes of § 301, as long as it is a type of work to which copyright might apply. If the Copyright Act withholds protection from such works, then states may not grant them copyright-like protection. See, e.g., *National Basketball Assn. v. Motorola, Inc.*, 105 F.3d 841 (2d Cir. 1997); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

intellectual property clause of the Constitution arguably would exert independent preemptive force.⁸³

Relying on this distinction between particular contracts and universally- applicable proprietary regimes, courts and commentators attempting to decide whether copyright law preempts inconsistent contract terms have characterized legitimate contract restrictions as involving an "extra element" of breach of promise or a "special relationship" between copyright owner and consumer that is distinct from the copyright owner's rights against the world.⁸⁴ Recently, the Seventh Circuit interpreted this test in a way that indicates its

The question whether the Copyright Act preempts certain provisions in licenses for digital works is really two questions. The first question, discussed in the text, is whether state contract law can be considered to establish a regime of "equivalent" rights for purposes of § 301. The second question--whether the Copyright Act preempts state laws other than those covered by § 301--is more complicated. Compare *Freightliner Corp. v. Myrick*, 514 U.S. 280, 288 (1995) ("The fact that an express definition of the pre-emptive reach of a statute 'implies' ... that Congress did not intend to pre-empt other matters does not mean that the express clause entirely forecloses any possibility of implied pre-emption.") with *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 517 (1992) ("When Congress has considered the issue of pre-emption and has included in the enacted legislation a provision explicitly addressing that issue, and when that provision provides a 'reliable indicium of congressional intent with respect to state authority,' ... 'there is no need to infer congressional intent to pre-empt state laws from the substantive provisions' of the legislation.") (quoting *Malone v. White Motor Corp.*, 435 U.S. 497, 505 (1978)). One court has given the Copyright Act broader preemptive scope, but without discussing whether § 301 precludes that result (and, indeed, without discussing § 301 at all). See *Vault Corp. v. Quaid Software, Ltd.*, 847 F.2d 255 (5th Cir. 1988) (finding preemption of a standard form contract provision prohibiting reverse engineering). Myrick's rebuttable presumption is easily defeated here. Since it is clear that when Congress enacted § 301, it did not consider the wholesale displacement of copyright via self-enforcing, standard form digital contract terms, § 301 should not operate to bar implied preemption of such contracts. See Cohen, *supra* note 49, at 1129. Ultimately, however, the implied preemption inquiry does not matter much, because the intellectual property clause of the Constitution may require preemption even if the Copyright Act does not. See *infra* note 83.

⁸³ See U.S. Const. art. I, § 8, cl. 8; see *Feist Pubs., Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349-50 (1991) (holding that denial of copyright protection for facts is constitutionally compelled because facts must remain in the public domain); Cohen, *supra* note 49, at 1130-33; Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutory Impulse*, 78 Va. L. Rev. 149, 155 n.22 (1992); David L. Lange, *The Intellectual Property Clause in Trademark Law: An Appreciation of Two Recent Essays and Some Thoughts About Why We Ought To Care*, 59 L. & Contemp. Probs. 213, 225-44 (1996); David L. Lange, *Copyright and the Constitution in the Age of Intellectual Property*, 1 J. Intell. Prop. L. 119 (1993); Karjala, *supra* note 82, at 533-34, 539-41; L. Ray Patterson, *Copyright Overextended: A Preliminary Inquiry Into the Need for a Federal Statute of Unfair Competition*, 17 U. Dayton L. Rev. 385, 394-96 (1992); Malla Pollack, *Unconstitutional Incontestability? The Intersection of the Intellectual Property and Commerce Clauses of the Constitution: Beyond a Critique of Shakespeare Co. v. Silstar Corp.*, 18 Seattle U. L. Rev. 259 (1995); Marci A. Hamilton, *The Dormant Copyright Clause* (1998) (unpublished manuscript, on file with author); cf. O'Rourke, *Copyright Preemption*, *supra* note 5, at 73 n.108 (expressing agnosticism on the question "what the constitutional inquiry would add to § 301"); O'Rourke, *supra* note 49, at 696-97 (suggesting that constitutional considerations require preemption of standard form "license" terms barring World Wide Web linking).

⁸⁴ See *ProCD, Inc.*, 86 F.3d at 1454; O'Rourke, *Copyright Preemption*, *supra* note 5, at 76-77; O'Rourke, *Drawing the Boundary*, *supra* note 5, at 519- 23; see also *National Basketball Assn.*, 105 F.3d at 848-53 (applying the "extra element" test to a state law misappropriation claim and discussing collected authorities on the scope of § 301 preemption). But see Rice, *Public Goods*, *supra* note 70, at 615 ("The measure of equivalence is not literal. Claim elements additional to those of copyright infringement do not prevent preemption unless ... the extra elements make the state claim qualitatively different.").

In addition, the Fourth Circuit has held that an attempted contractual extension of the term of copyright constitutes misuse and renders the copyright (as opposed to the contract term) unenforceable. See *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970 (4th Cir. 1990); see also *DSC Communications Corp. v. DGI Techs., Inc.*, 81 F.3d 597, 601 (5th Cir. 1996) (suggesting that on

support for a regime based primarily on market ordering. It held that a mass-market shrinkwrap license met the requirements of voluntary assent and non-universality because the defendant-consumer remained free to return the product and seek better terms elsewhere, and because the license would not bind an individual who found a copy of the work lying in the street.⁸⁵ As justification for market ordering, however, the court's reasoning is unconvincing. Works protected by digital CMS cannot be copied or otherwise accessed by unauthorized third parties, so it is irrelevant that the licenses would not bind them if they did gain access.⁸⁶ And the opportunity to engage in comparison shopping, so important to the court in theory, does not seem particularly attractive if one must purchase each product to learn the terms governing its use. Proposed UCC Article 2B would validate for all digital publishers the current practice of software publishers not to disclose their terms prior to purchase, creating obvious practical difficulties for even the most determined comparison shoppers.⁸⁷ Moreover, there is a substantial difference between shopping

remand, infringement defendant might show that plaintiff's contract term effectively prohibiting reverse engineering of unpatented microprocessor cards amounted to copyright misuse). The Lasercomb court did not discuss preemption, and the connection between preemption and misuse remains largely unexplored in the legal literature. David Rice notes the overlap and suggests that under Lasercomb, a finding of preemption under § 301 might lead to complete unenforceability of the copyright. Rice, *Public Goods*, supra note 70, at 550-51; see also Merges, *The End of Friction?*, supra note 5, at 124-25 (noting potential nexus between the misuse and preemption doctrines). Mark Lemley argues that the copyright misuse doctrine will be increasingly useful as a complement to preemption law, because it allows courts to invalidate restrictive contract terms in particular cases without having to hold the restrictions preempted in all cases. See Mark A. Lemley, *Beyond Preemption: The Federal Law and Policy of Intellectual Property Licensing*, 87 Cal. L. Rev. (forthcoming Jan. 1999).

⁸⁵ See *ProCD, Inc.*, 86 F.3d 1447 (1996).

⁸⁶ See supra text accompanying notes 24-32; Jane C. Ginsburg, *Copyright, Common Law, and Sui Generis Protection of Databases in the United States and Abroad*, 66 U. Cin. L. Rev. 151, 167 (1997) [hereinafter Ginsburg, *Protection of Databases*]; Jane C. Ginsburg, *Copyright Without Walls?: Speculations on Literary Property in the Library of the Future*, 42 *Representations* 53, 62-63 (1993) [hereinafter Ginsburg, *Copyright Without Walls?*] ("[I]f copying could be electronically tracked or prevented, no 'third parties' to the contract would exist."); see also Cohen, supra note 9, at 181-83 (arguing that a copyright owner cannot unilaterally create a "special relationship" with the entire world); Karjala, supra note 82, at 529-31 (arguing that mass-market standard form contracts do not contain the "extra element" of bargaining).

Under proposed Article 2B of the UCC, this distinction vanishes entirely, because license restrictions would bind third parties. See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), supra note 24, § 2B-507; cf. *id.* at Preface, p. 9 (explaining drafters' decision not to carry over Article 2's provision for the unenforceability of property rights against a bona fide purchaser for value, see U.C.C. § 2-403 (1995), on the ground that such a provision would be inconsistent with licensors' federal intellectual property rights). As Jane Ginsburg notes, this approach effectively converts a contract right into a property right. See Ginsburg, *Protection of Databases*, supra, at 167. She notes, however, that contract and copyright remedies may differ, and argues that because contractual protection supplies incentive to invest in the creation of noncopyrightable information, mass-market contract terms inconsistent with copyright limitations should not be preempted without further policy analysis. See *id.* at 167-68. In contrast, Merges argues that extending standard form contract terms to third parties is inappropriate, but that property rules should fill the resulting gap in protection. See Merges, *The End of Friction?*, supra note 5, at 120-21 (arguing that the concept of privity, while "stretch[ed]" in the mass-market context, should retain some meaning).

⁸⁷ See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), supra note 24, §§ 2B-111, -112(b)-(c) & cmts. 2, 5; Braucher/Linzer Memorandum, supra note 77; Cem Kaner, *Restricting Competition in the Software Industry: Impact of the Pending Revisions to the Uniform Commercial Code 5* (last modified Nov. 11, 1997) <<http://www.badsoftware.com/nader.htm>>; cf. DeLong & Froomkin, supra note 40 (documenting finding that many online vendors of music compact discs withhold price information from comparison shoppers); Burk, supra note 40, at 19 (discussing implications of the DeLong and Froomkin study for arguments that digital commerce will be near-costless). Instead, the proposed draft would afford consumers who enter into

for price--something that many consumers of mass-marketed products do, and do well--and shopping for terms, which is much more difficult.⁸⁸

Unlike the Seventh Circuit, O'Rourke recognizes that there is a real question whether the circumstances surrounding a standard form, mass-market contract justify the inference of the "extra element" that is needed to escape preemption.⁸⁹ Her answer to this question, however, is market- conceptualism as high art. She argues, first, that an inference of voluntariness is justified if the market is functioning efficiently, forgetting that the UCC was adopted to allow the market to function in the absence of such particularized knowledge and assent.⁹⁰ As to universality, she suggests that a standard form contract restriction is not universal, or quasi- legislative, unless it is "unreasonable" to think that the parties would have bargained to it--even though section 301 speaks of rights in works, not power in markets, and even though it is incoherent to speak of reasonable bargains without voluntariness.⁹¹ Use of the neoclassical conception

mass-market licenses a limited rescission right after purchase but before use. See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), supra note 24, § 2B-112(b)-(c) & cmts. 2, 5.

⁸⁸ Why will not competition among producers protect the contract term taker as well? ... [T]he cost of acquiring and processing information on contract terms is much greater than for price; unless the firm intentionally makes the particular term an important selling point--as is sometimes the case with the length or inclusiveness of the warranty--few, if any, customers will perceive the existence of variations in terms. Any movement toward contractual equilibrium due to the aggressive bargain-seeking of a few customers will be slow indeed

Goldberg, supra note 79, at 485; see also Slawson, supra note 79, at 530-31, 540-41. The neoclassical economist might respond that this simply proves that most consumers do not care enough about the terms in question to bother with additional research, but this assumes the very point in dispute. The question of consumer perceptions is further complicated by the fact that producers may not routinely enforce particular terms that consumers might find oppressive. See Goldberg, supra note 79, at 485 n.53. Digital rights management technologies change this aspect of the equation, but it is not clear whether we may expect to see different consumer behavior as a result. As Goldberg observes, efforts to model the standard form contract have been hampered considerably by the fact that the neoclassical market model simply ignores it, or assumes that the requirements for a voluntary, fully-informed contract are in fact met. See *id.* at 483-84; see also Samuels, *Further Limits*, supra note 36, at 438-39. For an effort to model producer-consumer dynamics in mass markets for creative and informational works more accurately, and to incorporate into the model institutional considerations relating to standard form contracts, see *infra* section III.A.1.

⁸⁹ See O'Rourke, *Copyright Preemption*, supra note 5, at 77.

⁹⁰ See *id.* at 83-87 (arguing that a market may be "efficient" even if most parties are uninformed); see also Bell, supra note 5, at 601-08.

⁹¹ See O'Rourke, *Copyright Preemption*, supra note 5, at 83-89 (arguing that efficient--i.e., competitive--markets protect even uninformed parties by equilibrating around reasonable terms); O'Rourke, *Drawing the Boundary*, supra note 5, at 541-55; 17 U.S.C. § 301(a) (1994). Bell and Merges make similar arguments. See Bell, supra note 5, at 588-89 n.142; Merges, *The End of Friction?*, supra note 5, at 126. As Goldberg observes, this sort of reasoning obscures fundamental questions about consumer knowledge and desires. See Goldberg, supra note 79, at 485; supra note 88.

The whole point of copyright is to give owners at least some market power. See, e.g., Elkin-Koren, supra note 6, at 98-100 (discussing the "deadweight loss" aspect of copyright protection); Fisher, supra note 26, at 1700-04 (same); Landes & Posner, supra note 6, at 339-44. Exactly how much power is an empirical question, the answer to which probably will vary for different types of works. See *infra* text accompanying notes 218-26. Nonetheless, § 301's reference to "works" matters. Recognizing the inconsistency with § 301, O'Rourke argues that § 301 is "mechanical" and that authority to conduct a market analysis should be inferred to avoid preemption of "many" standard form license terms that conflict with copyright. See O'Rourke, *Copyright*

of contract to bootstrap voluntariness and "reasonableness" in this setting strains logic to the breaking point.⁹² For O'Rourke, it seems, "contract" means fully informed and voluntary as to nearly every term even when the law stipulates that it need not mean either of those things in fact to be enforceable. As a result, she overlooks the possibility that what is good enough to establish enforceability under the UCC and the antitrust laws, which are broadly concerned with maintaining functioning markets, may not be good enough to avoid preemption by copyright law, which has other, more substantive concerns.⁹³ The real question is whether a regime that makes it easier for publishers unilaterally to impose usage restrictions that conflict with copyright is better suited than copyright to optimize access and progress.⁹⁴ O'Rourke does not say; like the *Lochner* Court a century ago, she is too busy explaining that unilaterally imposed contract terms do not really exist.

Relying on this curiously circular presumption of voluntariness in the mass market for digital works, Hardy and Bell contrive to turn the tables on copyright completely. They argue that it is copyright law that constitutes the onerous standard form contract and market ordering that constitutes the flexible, policy-sensitive instrument.⁹⁵ This feat of lexical legerdemain allows them to disavow rigid boilerplate regimes that are unresponsive to individual or consumer desires while simultaneously endorsing private standard form contract regimes as the product of "empower[ed] mutually consenting parties."⁹⁶ The "market" is the realm of consent, while the legislative process is the realm of interest-group oppression. This approach has conceptual roots in both public choice theory and institutional economics. Ultimately, however, neither branch of economic theory justifies the conclusion the cybereconomists reach. Their insistence that the market is the better forum for achieving copyright's goals rests on no firmer basis than the *Lochner* Court's instinctive distrust of attempts to alter the existing balance of bargaining power.

Preemption, *supra* note 5, at 87-88.

⁹² Unless, of course, one is prepared to apply an external normative standard of "reasonableness"--which the neoclassical market model claims not to do. See *supra* note 36.

⁹³ See Rice, *Public Goods*, *supra* note 70, at 564-65 (observing that the UCC was developed "to allocate product failure and performance risks" between the parties, not to determine rights in the subject matter of the contract). For this reason (as O'Rourke recognizes), the objection that consumers do not expect to bargain over price misses the point. While one might cheerfully accept the need to pay a standardized price for Coca-Cola, no court would enforce a shrinkwrap contract that imposed an obligation not to reverse engineer it. See O'Rourke, *Copyright Preemption*, *supra* note 5, at 80-81.

⁹⁴ This question is considered further *infra* in section III.A.

⁹⁵ See Bell, *supra* note 5, at 607-08 ("Insofar as th[e fair use] doctrine represents a 'bargain' between copyright owners and the public--a popular fiction--it epitomizes the kind of take-it-or-leave-it offer that foes of adhesion contracts so dislike." (footnotes omitted)); Hardy, *supra* note 44, PP 38-39 (characterizing the Copyright Act as "specifying what are essentially the actual quite specific terms of large classes of 'bargains' over the use of intellectual property"); see also O'Rourke, *Copyright Preemption*, *supra* note 5, at 78-79, 83-84 (arguing that an "immutable rules" approach to copyright is undesirable because "the impersonal workings of the market" protect even uninformed parties).

⁹⁶ See Bell, *supra* note 5, at 608.

The central thesis of public choice theory is that government actions are rarely, if ever, designed solely to serve a monolithic public interest. Rather, the various outputs of the political process, including legislation, regulation, and enforcement, are shaped by the rent-seeking efforts of powerful and well-organized constituencies.⁹⁷ In its strongest form, public choice theory characterizes the legislative and political processes as entirely, or almost entirely, defined by interest-group concerns and compromises.⁹⁸ This perception underlies Hardy's description of copyright legislation and Merges's depiction of the rate-setting process under the legislated compulsory license for sound recording rights.⁹⁹ Nor is it entirely inaccurate; as Jessica Litman has documented, over the past several decades the path of copyright legislation has been defined largely by the major copyright industries.¹⁰⁰

As the new institutional economics would counsel, the cybereconomists compare the legislative process with the market and market-generated collective licensing institutions, and find the market superior. Both legislative and market actions reflect the pursuit of self-interest, but the self-interest manifested in the market is (so the reasoning appears to go) uncomplicated by distorting interest-group effects, undiminished by administrative costs, and subject to the market's wealth-maximizing power of correction.¹⁰¹ But that is disingenuous, and far too simple. First, the comparison is misdirected. The legislative process may (indeed must) be imperfect, but it does not follow that the market is always preferable. An equally important lesson of institutional economics is that all real-world institutions, including market-based ones, are imperfect, and that it is real-world institutions that must be compared.¹⁰² As discussed above, the market we have is not

⁹⁷ See Daniel A. Farber & Philip P. Frickey, *Law and Public Choice: A Critical Introduction* (1991).

⁹⁸ See, e.g., *The Calculus of Consent* (James Buchanan & Gordon Tullock eds., 1962); *The Political Economy of Rent-Seeking* (Charles K. Rowley et al. eds., 1988). But see Farber & Frickey, *supra* note 97, at 24-33, 49-60 (summarizing empirical work that undercuts the strong public-choice hypothesis); Herbert Hovenkamp, *Legislation, Well-Being and Public Choice*, 57 *U. Chi. L. Rev.* 63, 88-89 (1990) (same); Donald P. Green & Ian Shapiro, *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science* (1994) (arguing that the theory has not been empirically validated and that most studies purporting to do so are methodologically unsound); cf. *The Rational Choice Controversy: Economic Models of Politics Reconsidered* (Jeffrey Friedman ed., 1995) (collecting responses to Green and Shapiro).

⁹⁹ See Hardy, *supra* note 5, at 254-58; Merges, *Contracting Into Liability Rules*, *supra* note 5, at 1306-17.

¹⁰⁰ See Jessica Litman, *Copyright Legislation and Technological Change*, 68 *Or. L. Rev.* 275 (1989) [hereinafter Litman, *Copyright Legislation*]; Jessica Litman, *The Exclusive Right to Read*, 13 *Cardozo Arts & Ent. L.J.* 29 (1994) [[hereinafter Litman, *The Exclusive Right*]; Litman, *Revising Copyright Law*, *supra* note 49, at 19 (1996).

¹⁰¹ See, e.g., James M. Buchanan, *Rent Seeking and Profit Seeking*, in *Toward a Theory of the Rent-Seeking Society* 3, 8-9 (James M. Buchanan et al. eds., 1980); Eggertson, *supra* note 50, at 275-77; see generally Hovenkamp, *supra* note 98, at 98-106 (summarizing literature).

¹⁰² See, e.g., Randall Bartlett, *Economics and Power: An Inquiry Into Human Relations and Markets* 203-06 (1989); Ronald Coase, *The Problem of Social Cost*, 3 *J.L. & Econ.* 1, 43 (1960); Eggertson, *supra* note 50; Goldberg, *supra* note 79, at 473-74; Maxwell L. Stearns, *The Misguided Renaissance of Social Choice Theory*, 103 *Yale L.J.* 1219, 1229-30 (1994). Demsetz also makes this argument. See Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 *J.L. & Econ.* 1 (1969) (characterizing the comparison of imperfect institutions against ideal alternatives as the "nirvana approach"). Gillian Hadfield notes, however, that Demsetz did not practice what he preached, and failed to "weigh the costs of the [private property] system

the pure neoclassical market the cybereconomists posit. Without closer attention to the imperfections present in the existing consumer mass market, even a strong public-choice hypothesis does not demonstrate that the market is the preferred forum for determining copyright policy.¹⁰³

Second, and more important, the comparison is incomplete. Market ordering and government oversight are complementary, not mutually exclusive, choices. Market ordering presupposes some ex ante distribution of entitlements.¹⁰⁴ The cybereconomists take existing entitlements as given, and do not inquire as to the welfare effects of alternative entitlement structures. For example, we might consider formalizing the public's fair use entitlements--an approach that, ironically, is suggested by Hardy's "divided ownership" model.¹⁰⁵ This is a choice that would matter; it may well be that in the perfect, costless world, the market

against its benefits." Hadfield, *supra* note 26, at 43. Instead, he presumed "the operation of a perfectly competitive market." *Id.* at 43-44.

It is worth noting that the litigation process that polices the market is itself also vulnerable to a public-choice critique. See Einer R. Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 *Yale L.J.* 31, 68-71, 80-87 (1991) (arguing that public-choice analysis can be extended to the judiciary); Marc Galanter, *When the Haves Come Out Ahead*, 9 *L. & Socy. Rev.* 95, 98-104 (1974) (arguing that litigants who are repeat players and have the resources to do so will seek to shape the rules and the law in ways that favor their interests).

¹⁰³ Cf. Hovenkamp, *supra* note 98, at 99 ("Much of the public choice literature is filled with anecdotal evidence of great legislative failures, such as the Smoot-Hawley Tariff. But such failures are no different, and probably no more frequent, than the economic market's Edsels"); *id.* at 100 ("[P]olitical failure (substantial divergence between private gain and social gain) has never been shown to be more widespread in political markets than market failure (substantial divergence between private gain and social gain) in economic markets."); Mark Kelman, *On Democracy-Bashing: A Skeptical Look at the Theoretical and "Empirical" Practice of the Public Choice Movement*, 74 *Va. L. Rev.* 199, 232-34 (1988) (arguing that claimed inefficiencies generated by legislation must be compared "with the inefficiencies generated by an inegalitarian nonredistributive regime"); Stearns, *supra* note 102, at 1240-45 (demonstrating that in some circumstances, legislatures can efficiently correct for inefficient Arrowian "cycling" in markets).

¹⁰⁴ See, e.g., Bartlett, *supra* note 102, at 141-66, 195; Bromley, *supra* note 36, at 70; Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* 14-15 (1990); C. Edwin Baker, *Posner's Privacy Mystery and the Failure of Economic Analysis of Law*, 12 *Ga. L. Rev.* 475, 486 (1978); Guido Calabresi, *The Pointlessness of Pareto: Carrying Coase Further*, 100 *Yale L.J.* 1211, 1214 (1991); Victor P. Goldberg, *On Positive Theories of Redistribution*, 11 *J. Econ. Issues* 119, 121-22 (1977); Kelman, *supra* note 103, at 231-34; Kennedy & Michelman, *Are Property and Contract Efficient?*, *supra* note 36; Samuels, *Further Limits*, *supra* note 36, at 397, 406-07, 421-22; Cento G. Veljanovski, *Wealth Maximization, Law and Ethics--On the Limits of Economic Efficiency*, 1 *Intl. Rev. L. & Econ.* 5, 6 (1981); see also Samuels, *Welfare Economics*, *supra* note 36, at 9, 45-48 ("[N]ot only does the Pareto-analysis assume the existing income and wealth distribution, working rules, power structure and so on, but it tends to assume their propriety."); cf. Stearns, *supra* note 102, at 1240-45 (arguing that legislatures may be the most efficient fora to determine ex ante "how a market should best operate to facilitate private transactions").

As Lloyd Weinreb reminds us, "copyright is itself an intervention in the market, rather than, as it so often is made to appear, the 'natural' way of doing things." Lloyd L. Weinreb, *Copyright for Functional Expression*, 111 *Harv. L. Rev.* 1150, 1240 (1998).

¹⁰⁵ See *supra* text accompanying note 47; cf. Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 *U. Chi. L. Rev.* 711 (1996) (describing the origins of and justifications for common law doctrines that rest collective property rights in the "unorganized" public).

for digital works would reach the same equilibrium point regardless of initial entitlements, but we do not live in such a world, and the equilibrium that is reached will depend on where we start out.¹⁰⁶ A regime in which the public has property-like entitlements in certain uses of creative and informational works might be preferable, distributively speaking, to a regime in which they do not.¹⁰⁷ It also might promote the goals of access and progress more effectively than the private-law model that the cybereconomists prefer.¹⁰⁸

Alternatively, Margaret Jane Radin envisions a regime of "incomplete commodification," which would acknowledge both market and nonmarket understandings of entitlements and exchanges and expressly privilege nonmarket understandings in some circumstances.¹⁰⁹ In the particular case of copyrighted works, that regime might look very much like the one we have now, but it would operate quite differently in practice. For example, fair use cases would still be contested, but not the dual nature of the fair use doctrine itself. Rather, parties to copyright disputes would understand and accept that the doctrine does more than simply correct for market failure due to high transaction costs.¹¹⁰ In particular, the mere fact that new technologies had enabled new markets to form would not preclude a finding of fair use if nonmarket considerations of sufficient importance--such as educational access or first amendment rights of criticism and comment-- supported it.¹¹¹

¹⁰⁶ See Bromley, *supra* note 36, at 118-21, 134-43, 165-81 (modeling the effects of alternative entitlement structures and demonstrating that the efficient equilibrium point depends on the starting point). The original insight is, of course, Coase's. See Coase, *supra* note 102.

¹⁰⁷ See Baker, *supra* note 36, at 6-7, 28-31 (arguing that the socially optimal regime must be determined in part by distributive considerations).

¹⁰⁸ This question is considered in more detail *infra* at text accompanying notes 125-53, text accompanying notes 310-42, and text accompanying notes 358-74.

¹⁰⁹ See Radin, *supra* note 64, at 102-22.

¹¹⁰ See *supra* text accompanying notes 28-29; cf. Radin, *supra* note 64, at 95-104 (describing and rejecting the argument that the market paradigm necessarily exerts a "domino effect" on social policy).

¹¹¹ Two important recent decisions privileging the "market failure" view of fair use are *Princeton University Press, Inc. v. Michigan Document Service, Inc.*, 99 F.3d 1381 (6th Cir. 1996) (en banc) (reversing panel decision that photocopying excerpts from copyrighted works for student coursepacks was a fair use, because mechanism existed for licensing photocopying rights), and *American Geophysical Union v. Texaco, Inc.*, 60 F.3d 913 (2d Cir. 1994) (holding that corporate employee's photocopying of journal articles for research purposes was not a fair use where mechanism existed for licensing photocopying rights). An "incomplete commodification" regime would recognize good reasons to decide both of these cases differently. Cf. Lydia Pallas Loren, *Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 *J. Intell. Prop. L.* 1, 32-48 (1997) (arguing that the vision of fair use advanced in *Princeton University Press* and *American Geophysical* is inappropriately narrow). Another case that might be resolved differently is *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569 (1994). There, the Supreme Court recognized that defendants' rap parody of the song *Oh, Pretty Woman* was the sort of "transformative" use of preexisting material that promotes the purposes of copyright, but nonetheless suggested that infringement liability might attach if, on remand, the evidence suggested significant demand for a non-parody, rap version of the song. See *Campbell*, 510 U.S. at 593-94. Under an incomplete commodification regime, the transformative nature of parody and the high social value attached to critical commentary would support an order of summary judgment for defendants.

Either formalized public entitlements or incomplete commodification must come, of course, via the legislative process, with all the potential for lobbying and logrolling that process entails.¹¹² But to characterize either arrangement as the illegitimate result of interest-group pressure for that reason alone is facile. The cybereconomists offer no standard for determining when proposals for legislative change are fairly representative of the broader public interest, or for deciding how much interest-group pressure is too much.¹¹³ Moreover, they neglect to note that the existing copyright regime, which over the past two decades has allotted ever stronger entitlements to copyright owners, is itself a product of the legislative process they decry.¹¹⁴ Stripped of grand-sounding economic justifications, this unquestioning acceptance of the existing distribution of entitlements and bargaining power is *Lochner* pure and simple. In striking down labor reform measures as impermissible "class" legislation, the *Lochner*-era Court reasoned that "since it is self-evident that . . . some persons must have more property than others, it is from the nature of things impossible to uphold freedom of contract and the right of private property without at the same time recognizing as legitimate those inequalities of fortune that are the necessary result" of that freedom.¹¹⁵ In positing the current distribution of ownership and bargaining power as natural, and proposals to limit ownership prerogatives as inherently suspect, the cybereconomists make the same argument and commit

¹¹² See, e.g., Merges, *Contracting Into Liability Rules*, supra note 5, at 1308 n.29. "Incomplete commodification" also might be decreed judicially. However, in the wake of the *American Geophysical* and Princeton University Press decisions, this result seems increasingly unlikely.

¹¹³ See Elhauge, supra note 102, at 49-59 (arguing that one cannot determine whether interest-group influence is (to paraphrase Goldilocks) too big, too small, or just right without reference to some external normative standard); Goldberg, supra note 104, at 122 (arguing that identifying certain entitlements as initial and others as products of legislative redistribution "would be meaningful only if there were some set of 'fundamental natural rights' that together determined the natural distribution of wealth"); cf. Hovenkamp, supra note 98, at 106-07 (noting that in contrast to the original public choice theorists, whose work focused on description and explanation, those associated with "Chicago School" law and economics have given the theory a normative slant, seeking to minimize legislated wealth transfers). The implicit criterion that the legislative result not differ from the (presumptively efficient) result the market would have produced is self-evidently untenable, for the reasons just discussed. See supra text accompanying notes 101-08.

¹¹⁴ See Litman, *Copyright Legislation*, supra note 100, at 305-21. For examples of recent and proposed legislation expanding content owners' rights, see, e.g., No Electronic Theft Act, Pub. L. No. 105-147 (codified at 18 U.S.C. § 2311 (1997)) (criminalizing certain acts of copyright infringement even where the alleged infringer realizes no financial gain); Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298 (West, WESTLAW through 1998 Sess.) (extending the term of copyright protection by an additional 20 years); Digital Millennium Copyright Act, Pub. L. No. 105-304 (West, WESTLAW through 1998 Sess.) [hereinafter DMCA] (banning technologies that could be used to circumvent digital rights management systems and imposing (though deferring) liability for acts of circumvention); Collections of Information Antipiracy Act, H.R. 2652, 105th Cong. (1998) (creating a right against "misappropriation" of uncopyrightable collections of data); infra text accompanying notes 283-85 (discussing the Digital Millennium Copyright Act in more detail). Authors' exclusive rights in copyrighted works underwent a parallel expansion at the turn of the twentieth century. See Lunney, supra note 6, at 536-37 & n.214.

¹¹⁵ *Coppage v. Kansas*, 236 U.S. 1, 17 (1915). Thus, as Michael Benedict documents, what began as a principled distrust of the power of wealthy "factions" to subvert government became a reflexive aversion to legislative action designed to aid any group, including--and, for some *Lochner*-era thinkers, especially--"the ignorant and propertyless mass of urban voters." Benedict, supra note 2, at 306-10.

the same error. Declarations of entitlement are definitional, public acts and should be understood as such.¹¹⁶ Taken on its own terms, the cybereconomists' process-oriented critique offers no principled basis for preferring any particular socially- determined entitlement structure over others.

In short, the cybereconomists' argument from contract principles reduces to the propositions that market ordering is efficient because it is market ordering and that the legislative process is inefficient because it is not. Without more, this hardly constitutes a compelling case for replacing the public law of copyright with a regime based on the private law of contract. Still remaining to be considered, however, is the contention that, assuming efficient markets, the societal goals of access and progress are best served by according digital publishers more complete control of their digital content.

B. Manufacturing Scarcity

The cybereconomists' approach to the question of optimal author/owner control reveals a similar essentialism, and similar logical lacunae. Their proposal for a private-law regime of digital intellectual property rights is based on a fiction about the invariant nature of "property" and its relation to social welfare. Social welfare, in their view, is simply the sum of the wealth generated by private transactions; therefore, the most efficient regime of entitlements in creative and informational works is that which affords owners of such "property" the control necessary for them to maximize its market value. Social efficiency--defined here as optimization of the access and progress desiderata--and allocative efficiency are synonymous, or at least inseparably linked. Whether or not this thesis is valid as applied to other types of property, the economic case for assigning strong, undivided property rights in digital works is inadequate at best. Determining the optimal degree of author/owner control of digital content requires careful consideration of what system of entitlements would be most effective given the public-good nature of creative and informational works and the unpredictable pathways of creative progress.

The strongest version of the argument for control is, of course, Hardy's. He advocates simply abandoning the conceptual framework of copyright in favor of digital property rights expressly modeled on their private-law counterparts.¹¹⁷ In contrast, Merges, Bell, and O'Rourke frame their assertions about control in the rhetoric of contract and public choice. Ultimately, however, they contend that copyright owners should be afforded contract rights broad enough to accomplish virtually the identical result urged by Hardy,

¹¹⁶ See supra text accompanying note 104. This insight, too, dates back to the *Lochner* era. See, e.g., American Legal Realism 98-129 (William W. Fisher III et al. eds., 1993); Horwitz, supra note 22, at 145-67, 194-98; Keith Aoki, (Intellectual) Property and Sovereignty: Notes Toward a Cultural Geography of Authorship, 48 *Stan. L. Rev.* 1293, 1334-38 (1996); Felix S. Cohen, Transcendental Nonsense and the Functional Approach, 35 *Colum. L. Rev.* 809 (1935); Morris R. Cohen, Property and Sovereignty, 13 *Cornell L.Q.* 8 (1927); Robert L. Hale, Coercion and Distribution in a Supposedly Non- Coercive State, 38 *Pol. Sci. Q.* 470 (1923). It is particularly true of intellectual property, which is in no conceivable sense "prepolitical." See supra text accompanying notes 18-23.

¹¹⁷ See supra text accompanying notes 46-48.

for virtually identical reasons.¹¹⁸ The similarity is underscored by Merges's unequivocal rejection of legislatively-mandated "liability rules" in the intellectual property context.¹¹⁹ Accordingly, I shall use the analytic framework supplied by Hardy, with some refinements supplied by Merges, to evaluate the cybereconomists' "control thesis." Hardy and Merges use two different types of arguments to justify a private-property regime: the assertedly low costs of transacting in and fencing digital information, which (they argue) make strong property rights the most efficient vehicle for allocating creative resources to their most highly valued uses, and the need for an effective incentive structure to induce creative activity.¹²⁰

1. Transaction Costs and Common Resources

To support his argument about transaction costs, Hardy relies on Harold Demsetz's axiom that (given effective fencing techniques) dividing commonly-owned property into privately-owned parcels is the more efficient way of maximizing its value.¹²¹ However, Demsetz implicitly presumes both knowledge about effective long-term growth strategies and reduced costs of implementing these strategies under a private-ownership system.¹²² Thus, for Hardy's model to be accurate, we must know what sort of access regime would maximize the production and distribution of creative and informational works over the long term, and know that assigning absolute property entitlements to copyright owners would lead to implementation of that regime more cheaply. (Put differently, we must know that Hardy's scheme would produce fewer significant long-term social costs, or greater long-term social gains, or both.) If either of these conditions does not hold, the case for the putative efficiency of Hardy's scheme vanishes.¹²³ This

¹¹⁸ Cf. Ginsburg, *supra* note 86, at 63 ("When 'we're all connected,' no functional difference may exist between a contract and a property right."). To the extent that they would recognize limitations on author/owner control, Merges, Bell, and O'Rourke conceive those limitations in terms of abuse of the market process--e.g., unconscionability or the acquisition of antitrust market power--rather than as definitional restrictions that would apply regardless of the owner's behavior or market position. See Bell, *supra* note 5, at 591, 607; Merges, *The End of Friction?*, *supra* note 5, at 126; O'Rourke, *Copyright Preemption*, *supra* note 5, at 81-87; O'Rourke, *Drawing the Boundary*, *supra* note 5, at 541-55. But see Merges, *The End of Friction?*, *supra* note 5, at 134-35 (advocating, at least in principle, a limited "fair use" exception to digital property rights for designated classes of users); *supra* text accompanying note 57. This convergence of contract reasoning with property reasoning mirrors the Lochner-era view that the system of social ordering should protect the market decisions of economic actors. See *infra* text accompanying notes 161-71.

¹¹⁹ See Merges, *Contracting Into Liability Rules*, *supra* note 5, at 1302-17; *supra* text accompanying notes 53-56; see also Merges, *The End of Friction?*, *supra* note 5, at 120-21 (arguing that property rights are necessary to protect content owners against third parties who may acquire copies of their works). On Hardy's and Merges's discussions of the law and economics literature on the choice between property and liability rules, see *infra* text accompanying notes 150-53.

¹²⁰ See *supra* text accompanying notes 44-56; cf. Netanel, *supra* note 36, at 308-10, 314-21 (describing neoclassically-based model of copyright as a mechanism for achieving allocative efficiency, as well as a source of incentives to create).

¹²¹ See Harold Demsetz, *Toward a Theory of Property Rights*, 57 *Am. Econ. Rev.* 347, 351-52, 355-56 (1967). Similar reasoning underlies Edmund Kitch's proposed "prospect" approach to patents. See Kitch, *supra* note 36.

¹²² See Demsetz, *supra* note 121; see also Lemley, *supra* note 6 at 1048- 65 (criticizing, in particular, Kitch's prospect theory); cf. Weinreb, *supra* note 104, at 1239 ("[T]he elegance and persuasiveness of the [allocative efficiency] argument depend on its remaining insistently hypothetical and abstract.").

¹²³ At the very least, the question becomes more complicated, since Hardy must demonstrate that the sum total of negative externalities and/or decreases in productivity under his system would be smaller than the "transaction costs" imposed under the current system.

is precisely what is disputed in the current debate over the scope of copyright in digital works.¹²⁴ Arguing that undivided entitlements are per se more efficient simply assumes away the problem.

Assuming that Demsetz is correct about the superiority of a private- ownership system in some cases,¹²⁵ there are reasons to suspect that creative works do not satisfy the assumptions required by the Demsetz model. Demsetz focuses on conservation of known, currently existing resources--for example, fur-bearing animals or river water.¹²⁶ The interests of private property owners and of society in general may not be exactly identical in such cases--for example, society may wish to conserve the population of fur-bearing animals over a longer time span, or ensure that the river water remains suitable for a broader spectrum of uses--but they may often coincide substantially. Copyright, in contrast, is concerned with stimulating the production of new creative works; it does not seek only or even primarily to conserve existing works for their own sake.¹²⁷ Here, the interests of current copyright owners and of society may diverge. Society may wish to recognize and accord privileges to new authors, whose works may outsell, displace, or criticize those of existing authors.¹²⁸ In addition, there is no particular reason to believe that a new author's ability to pay for the right to use an existing work is a good predictor of the quality of the eventual result, whether quality is measured in terms of market success or by some other standard.¹²⁹ Thus, it is at least conceivable that vesting existing authors/owners with absolute control over the terms of access would deter

¹²⁴ See, e.g., Aoki, *supra* note 116, at 1333-37; Elkin-Koren, *supra* note 6, at 109-13; Lemley, *supra* note 6, at 1048-65; Litman, *Revising Copyright Law*, *supra* note 49; see also Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Programs*, 68 S. Cal. L. Rev. 1091, 1104-24 (1995) (arguing that the purpose of copyright is not merely to disseminate works to the public as consumers, but also to foster access to works by the public as creators, and that a maximum- protection regime does not serve this purpose); Kreiss, *supra* note 6 (same); Litman, *supra* note 6 (same); Netanel, *supra* note 36 (arguing that a purpose of copyright is to promote the deliberation and debate constitutive of a robust democratic public sphere, and that a maximum-protection regime does not serve this purpose); Niva Elkin-Koren, *Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace*, 14 *Cardozo Arts & Ent. L.J.* 215 (1996) (same).

¹²⁵ This is far from clear. See, e.g., Bromley, *supra* note 36, at 12- 18; Ostrom, *supra* note 104, at 1-28.

¹²⁶ See generally Demsetz, *supra* note 121. Demsetz does briefly mention patents and copyrights, but does little more than offer the standard public-good/market-failure justification for affording any exclusive rights. See *id.* at 359; *supra* text accompanying notes 25-26.

¹²⁷ See U.S. Const. art. I, § 8, cl. 8 (authorizing limited grant of exclusive rights to promote "Progress").

¹²⁸ Cf. Wendy J. Gordon, *Toward A Jurisprudence of Benefits: The Norms of Copyright and the Problem of Private Censorship*, 57 *U. Chi. L. Rev.* 1009, 1042-43 (1990) (outlining the calculus that might lead society to override private censorship of criticism).

¹²⁹ The likelihood of creative success, however defined, is extremely difficult to judge before the fact. Cf. Lemley, *supra* note 6, at 1055-56 (noting that uncertainty as to the result may preclude an accurate assessment of the gains from trade). This problem is particularly acute for the newest authors, who lack established reputations. New authors may therefore have difficulty finding publishers or other backers willing to underwrite their requests for "usage rights." Even if these problems of prediction could be overcome, moreover, the notion that ability to pay provides a reliable and appropriate measure of a resource's value, or of the value of its intended use, has long been discredited. See, e.g., Baker, *supra* note 36, at 9-20; Kelman, *supra* note 36, at 678-85; Leff, *supra* note 36, at 455-58, 462-63, 478-80.

or prevent the creation of some valuable works that would be produced under the current system.¹³⁰ If so, the cybereconomists' "control-equals-access-equals-progress" syllogism is false; certainly, they have not proved it to be true. Even if it results in increased consumer access to digital works, a private-law regime designed to maximize control will not necessarily result in more or better creative progress.¹³¹ The increase in the private benefits flowing to intellectual property owners will not necessarily correspond to an increase in the social benefits flowing to the public as a whole.¹³²

Merges's proposal for collective institution-building by copyright owners does not offer a way out of this difficulty. Such a collective is no more guaranteed to safeguard the interests of future authors, and thereby serve society's interests, than are individual copyright owners.¹³³ To support his argument that private copyright management collectives are the efficient solution to the problem of administering transactions in creative works, Merges relies on economist Elinor Ostrom's study of the evolution and operation of institutions for collective management of commonly-owned property.¹³⁴ Ostrom focuses on the benefits of collective governance for community members who want access to a shared resource, and expressly excludes from consideration "situations in which participants can produce major external harm for others."¹³⁵ Merges likewise emphasizes the potential of collective institutions to foster cross-licensing and other cooperative behavior among members. Consumers and future creators figure in his analysis only as potential trespassers, not as parties whose interests should be represented in the constitution and

¹³⁰ See, e.g., *Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394 (9th Cir. 1997) (lawsuit against satirist who used characters and scenes from plaintiff's popular "Dr. Seuss" books as a vehicle to comment on the controversial O.J. Simpson trial), cert. dismissed, 118 S. Ct. 27 (1997); *Salinger v. Random House, Inc.*, 811 F.2d 90 (2d Cir. 1987) (lawsuit by reclusive author against biographer who excerpted portions of author's letters), cert. denied, 484 U.S. 890 (1987). *Maxtone-Graham v. Burtchaell*, 803 F.2d 1253 (2d Cir. 1986) (lawsuit by abortion rights activist against anti-abortion activist who used excerpts of her work in a book arguing against abortion rights), cert. denied, 481 U.S. 1059 (1987); see also Lemley, *supra* note 6, at 1056-61 (discussing other reasons that might lead existing copyright owners to refuse licenses for socially valuable improvements).

¹³¹ As explained *supra* at text accompanying notes 24-32, digital rights management technologies make it possible to decouple access and reuse rights. Thus, asserting control over reuse need not interfere with content owners' ability to market their works to consumers. On the question of how "better" progress is defined, see *infra* section III.B.2.

¹³² I am far from the first critic of Demsetz's work to make this observation. See, e.g., Bromley, *supra* note 36, at 175-83 (demonstrating that "productive" or monetary efficiency is only one of the issues that factor into the determination of whether a particular rule or practice is socially efficient); Andreas A. Papandreou, *Externality and Institutions* 225 (1994) ("[I]nstitutional change does not require efficiency gains to be initiated, it requires gains to the initiators of change, which may or may not coincide with an overall increase in wealth."); Amartya K. Sen, *Choice, Welfare and Measurement* 288-90 (1982); Mishan, *supra* note 36, at 95, 103-05; see also Bromley, *supra* note 36, at 137-39 ("Judgments about social efficiency require that analysis be conducted against the backdrop of some social welfare function and its implicit social utility function." (emphasis in original)); Baker, *supra* note 36, at 6-7, 28-31 (arguing that "human satisfaction" is a function of distributive as well as efficiency considerations); Veljanovski, *supra* note 104, at 19 ("The only wealth-maximizing outcome that is ethically attractive is the one based on a 'just' assignment of initial rights.") (emphasis omitted)).

¹³³ See Papandreou, *supra* note 132, at 200-04 (arguing that because private benefit and social benefit may diverge, Demsetz's approach will not necessarily lead to the formation of socially optimal institutions).

¹³⁴ See Ostrom, *supra* note 104.

¹³⁵ *Id.* at 26.

governance of these institutions.¹³⁶ Whether licensing collectives might produce negative externalities for these parties or for society generally is a question that he does not consider.¹³⁷

Relatedly, Ostrom suggests that collective institutions are more likely to be effective over the long term if ownership privileges are restricted to a closed, relatively homogenous group.¹³⁸ The community of authors is neither closed nor homogenous--nor, presumably, would we want it to be. Merges's discussion of performing rights societies (copyright collectives that license public performance rights in musical compositions) is not to the contrary. ASCAP and BMI, the two main performing rights societies in the United States, together have over 250,000 members and a "stable" of millions of works.¹³⁹ However, neither ASCAP nor BMI is a private institution in the sense that both Merges and Ostrom use that term. Rather, both societies operate under antitrust consent decrees that govern their membership, internal governance, and licensing practices.¹⁴⁰ The decrees require ASCAP and BMI to make membership available on a nondiscriminatory basis, to issue licenses to all who request them, and to accept a judicially-determined reasonable fee (ASCAP) or a fee determined by an arbitrator (BMI) in the event of a dispute.¹⁴¹ Most significantly, the decrees prohibit ASCAP and BMI from holding or licensing any rights in copyrighted musical compositions other than the public performance rights.¹⁴² These provisions suggest that the government and the respective courts believed that allowing collective organizations control over the entire bundle of rights in copyrighted works would be detrimental to competition. In short, the example

¹³⁶ See, e.g., Merges, *Contracting Into Liability Rules*, supra note 5, at 1325-27, 1372-73. For this reason, Merges's example of self-governing patent pools in the airplane and automobile industries, in which inventors, consumers, and future inventors are likely to be drawn from the same small group of repeat players, says little about the desirability of collective licensing arrangements for copyrighted works, for which there is no comparable guarantee. See *id.* at 1342-52; cf. Gary D. Libecap, *Contracting for Property Rights* 24-28, 116 (1989) (identifying as the stakeholders in institutional design only those groups with claims to property rights). In contrast, technologist Mark Stefik has proposed the establishment of a Digital Property Trust, composed of representatives from both the copyright industries and consumer groups, to oversee digital rights management policies and practices. See Stefik, *Shifting the Possible*, supra note 24, at 156-58; Mark Stefik & Alex Silverman, *The Bit and the Pendulum: Balancing the Interests of Stakeholders in Digital Publishing*, 7 *Am. Programmer* 1, 13-14 (1997).

¹³⁷ In very general terms, an externality is a cost or benefit generated by an exchange but borne or received by third parties, and therefore not taken into account by the parties themselves. See Cooter & Ulen, supra note 25, at 38-40. More precise definitions vary; for discussion of definitional issues and of the externalities generated by transactions in creative and informational works, see *infra* section III.B.1.

¹³⁸ See Ostrom, supra note 104, at 205-07, 211; cf. Libecap, supra note 136, at 21-23 (observing that a large number or heterogeneity of competing interests will delay the creation of new institutions for allocating property rights); *id.* at 116 (noting that distributional considerations frequently lie at the root of conflicts over institutional development).

¹³⁹ See Merges, *Contracting into Liability Rules*, supra note 5, at 1334-35.

¹⁴⁰ See *United States v. Broadcast Music, Inc.*, 1966 Trade Cas. (CCH) P 71,941 (S.D.N.Y. 1966) ("BMI"), as amended, 1996-1 Trade Cas. (CCH) P 71,378 (S.D.N.Y. 1994); *United States v. The American Socy. of Composers, Authors & Publishers*, 1950 Trade Cas. (CCH) P 62,595 (S.D.N.Y. 1950) ("ASCAP II"); *United States v. The American Socy. of Composers, Authors & Publishers*, 1941 Trade Cas. (CCH) P 56,104 (S.D.N.Y. 1941) ("ASCAP").

The California water districts studied by Ostrom also operate under judicial decrees, but Ostrom finds it significant that the participants themselves initiated legal proceedings in order to structure their own bargaining process. See Ostrom, supra note 104, at 110. That was not the case with ASCAP and BMI. See *BMI*, 1966 Trade Cas. (CCH) P 83,324; John Ryan, *The Production of Culture in the Music Industry* 92-100 (1985) (discussing ASCAP decree).

¹⁴¹ See *BMI*, 1966 Trade Cas. (CCH), at 83,325-26; *ASCAP II*, 1950 Trade Cas. (CCH), at 63,754.

¹⁴² See *BMI*, 1966 Trade Cas. (CCH), at 83,325; *ASCAP II*, 1950 Trade Cas. (CCH), at 63,752.

of ASCAP and BMI does not support Merges's thesis that privately-governed collective institutions represent the optimal solution for licensing a broad range of usage rights in copyrighted works.

Ostrom's research has only limited bearing on the problem of rights in creative works for an even more basic reason, however. Ostrom explicitly distinguishes renewable but potentially exhaustible common-pool resources--the focus of her study, and of Demsetz's theorizing--from true public goods, such as the creative works at issue here.¹⁴³ Because common pool resources are subject to depletion through overuse, a system of entitlements must address both provision (replenishment) and appropriation issues. Based on her research, Ostrom concludes that conditioning appropriation rights on provision obligations is the most effective long-term strategy for conservation and renewal.¹⁴⁴ In contrast, appropriation poses no direct threat of depletion of a public good, which by definition is both non-excludable and non-rivalrous; a public good benefits all without depletion.¹⁴⁵ A regime designed to ensure provision of a particular public good might use appropriation rights as an incentive, but need not do so. Certainly, it need not assign providers complete, undivided appropriation rights--that is to say, it need not treat the good as a common pool resource or, as Hardy would have it, a private good--especially if society concludes that a limited-entitlements regime would do a better job of inducing provision. The possibility that authors, if given undivided property entitlements and left to their own devices, might create efficient rights-management institutions says nothing about whether they should be given undivided property entitlements in the first place.¹⁴⁶

Both Hardy and Merges also rely, in different ways, on the conventional wisdom that lowered transaction costs favor property rules to encourage bargaining.¹⁴⁷ In fact, it is not so clear that digital networks will lower transaction costs in all cases.¹⁴⁸ But the argument is flawed in any case. Hardy relies largely on Calabresi and Melamed's important but preliminary exploration of differences in entitlement structures.¹⁴⁹ This ignores a substantial recent literature suggesting that the choice between property rules and other types

¹⁴³ See Ostrom, *supra* note 104, at 32-33; see also *supra* text accompanying note 25 (discussing public good nature of creative works). Demsetz's seminal article speculates briefly about the implications of his work for the system of intellectual property rights. See Demsetz, *supra* note 121, at 359. In later works, he tackled the issue of property rights in information more directly; however, he did not answer or even address the concerns raised here. See Demsetz, *supra* note 102; Harold Demsetz, *The Private Production of Public Goods*, 13 *J.L. & Econ.* 293 (1970); see also Hadfield, *supra* note 26, at 41-45 (concluding that Demsetz's work "does not take us far in the analysis of appropriate public policy with respect to intellectual products" because he does not address the problem of imperfection in markets).

¹⁴⁴ See Ostrom, *supra* note 104, at 32-33, 46-50, 90-92.

¹⁴⁵ See *id.* at 32; Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 *Mich. L. Rev.* 1197, 1236 (1996) ("[U]nlike land, intellectual property offers no potential for a tragedy of the commons."); *supra* note 25.

¹⁴⁶ Cf. Bromley, *supra* note 36, at 78-79 ("The issue is not one of being efficient or inefficient in the abstract, but of being efficient or inefficient with respect to a particular purpose or objective."); *id.* at 148-83 (demonstrating that the efficient equilibrium point depends on the initial distribution of entitlements, which must be determined with reference to "social efficiency" rather than mere "productive efficiency").

¹⁴⁷ See Hardy, *supra* note 5, at 229-32, 241-42; Merges, *Contracting Into Liability Rules*, *supra* note 5, at 1303-06.

¹⁴⁸ See Burk, *supra* note 40, at 18-20; DeLong & Froomkin, *supra* note 40.

¹⁴⁹ Hardy, *supra* note 5, at 229-32, 241-42 (citing Calabresi & Melamed, *supra* note 69).

of rules depends on a number of factors, of which transaction costs is only one.¹⁵⁰ Merges undertakes a more thorough review of the current literature, and in particular the conclusion of Ian Ayres and Eric Talley that liability rules are more likely to encourage efficient bargains in cases of information asymmetry.¹⁵¹ He concludes that property rules are preferable where intellectual property is concerned, because they allow intellectual property owners to maximize their monetary return (and thus, also, their incentives to create new works).¹⁵² However, he neglects to explain why this result is desirable. If society believes that limiting author/owner control of digital works will promote progress more effectively, a legal regime that enhances control would be unwise.¹⁵³

In sum, for Hardy and, it seems, for Merges, all "property" axiomatically requires the Blackstonian right of absolute exclusionary power in order to attain its highest value.¹⁵⁴ Thus, they are able to characterize

¹⁵⁰ See Ian Ayres & Eric Talley, Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules, 105 Yale L.J. 235 (1995) [[hereinafter Ayres & Talley, Liability Rules]; Ian Ayres & Eric Talley, Solomonic Bargaining: Dividing A Legal Entitlement to Facilitate Coasean Trade, 104 Yale L.J. 1027 (1994) [hereinafter Ayres & Talley, Solomonic Bargaining]; Louis Kaplow & Steven Shavell, Property Rules Versus Liability Rules: An Economic Analysis, 109 Harv. L. Rev. 713 (1996) [hereinafter Kaplow & Shavell, Property Rules]; Louis Kaplow & Steven Shavell, Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley, 105 Yale L.J. 221 (1995) [hereinafter Kaplow & Shavell, Reply]; A. Mitchell Polinsky, Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies, 32 Stan. L. Rev. 1075 (1980).

¹⁵¹ See Ayres & Talley, Solomonic Bargaining, supra note 150, at 1029- 30, 1032-33; Merges, Contracting into Liability Rules, supra note 5, at 1304 n.22. Kaplow and Shavell dispute this conclusion. They agree, however, that liability rules may induce efficient nonconsensual use of a disputed resource, particularly when bargaining is impossible. See Kaplow & Shavell, Reply, supra note 150, at 223-24. They also agree that divided property (as opposed to liability) entitlements may produce more efficient trade than undivided entitlements. See Kaplow & Shavell, Reply, supra note 150, at 222 n.5; Kaplow & Shavell, Property Rules, supra note 150. Both conclusions are potentially relevant to mass-market transactions in intellectual property. Cf. Lemley, supra note 6, at 1069-70 (discussing the operation of divided property entitlements in the patent system). Merges does not address them. Merges has been more receptive to the concept of dividing entitlements to facilitate bargaining with respect to patents. See Robert Merges, Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents, 62 Tenn. L. Rev. 75, 94-97 (1994); see also id. at 106 (distinguishing copyright- related transactions on the ground that high transaction costs are the only barrier to consensual exchange).

¹⁵² See Merges, Contracting Into Liability Rules, supra note 5, at 1303-06. Merges cites Kaplow and Shavell for the proposition that in some cases, a liability rule may inefficiently require the holder of a limited resource to make payments to "multiple takers" in order to retain control of the resource. See id. at 1305 n.23 (citing Kaplow & Shavell, Property Rules, supra note 150, at 765-66). As discussed above, however, intellectual property is a public good, so the Kaplow and Shavell reasoning, which presumes rivalrous use, does not apply. See supra text accompanying notes 143-46.

Ayres and Talley agree that undivided property entitlements might be the appropriate choice in cases presenting incentive problems. See Ayres & Talley, Solomonic Bargaining, supra note 150, at 1084-85. However, it is not at all clear that such problems exist in the case of creative and informational works. See infra text accompanying notes 159-60.

¹⁵³ See Netanel, supra note 36, at 335 & n.228. Kaplow and Shavell suggest that nonconsensual taking under a liability rule may not be efficient when owners, on average, place higher idiosyncratic value on the resource than do takers. See Kaplow & Shavell, Property Rules, supra note 150, at 760-63; supra note 151. In the case of creative and informational works, however, the value realized by the "owner" is not the only, or even the most important, measure of the value realized by society. See supra text accompanying notes 121-32; infra section III.B.1.

¹⁵⁴ See Hardy, supra note 5, at 230 (defining "property" as conferring a right of exclusion) (citing Calabresi & Melamed, supra note 69, at 1092); Merges, Contracting Into Liability Rules, supra note 5, at 1305 (expressing dismay at the prospect that, under a liability rule, there would be "many people who might be in a position to take an entitlement").

To bolster his appeal to essentialism, Hardy argues that his sense of "property" is the sense in which the framers of the

the legislative process that shapes the public law of copyright as a wasteful cost of transacting rather than a necessary cost of production.¹⁵⁵ There is one piece of the puzzle remaining, however. Although they are primarily concerned with demonstrating that private-law rules will maximize allocative efficiency, the cybereconomists also make arguments about the relationship between control, monetary return, and creative incentives. Understanding the basis for their conceptualization of property, and the reason that they fail to recognize the potential societal interest in limiting author/owner control, requires consideration of these arguments as well.

2. Incentives and Redistribution

Hardy asserts that his proposed expansion of copyright owners' legal entitlements is simply an adjustment to maintain the size of the owners' overall "pie" of incentives. He notes, in particular, that the "slice" of protection formerly afforded by the difficulty and expense of producing high-quality copies has shrunk due to the ease of copying digital files.¹⁵⁶ Hardy argues that any decrement in copyright owners' aggregate protection against copying will reduce the market value of their works, which in turn will reduce their incentives to create new works--which, of course, will result in less progress, and ultimately less access as well.¹⁵⁷ The clear implication of all this is that expansion of legal entitlements is necessary to avoid a redistribution of economic value from copyright owners to the public, with potentially catastrophic consequences. Nothing could seem more reasonable. Similar reasoning leads Merges to characterize his proposal for limited privileges for certain classes of users as essentially redistributive.¹⁵⁸

In fact, however, this reasoning rests on two unsupported, and unsupportable, assumptions. First, it assumes a direct, linear relationship between market value and incentives, and thus (again) makes maximization of creative works' monetary value the sole measure of copyright's efficacy at inducing progress. As discussed above, maximizing a work's post-creation value to the copyright owner will not necessarily maximize its value to society.¹⁵⁹ The argument that the law will encourage the most progress

Constitution understood it. But this argument proves too much; the framers may well have understood "property" as Hardy describes, but they authorized Congress to grant only "exclusive [r]ights" for "limited [t]imes." U.S. Const. art. I, § 8, cl. 8; see Hardy, *supra* note 44, P 37; see also Hamilton, *supra* note 83; Meredith L. McGill, *The Matter of the Text: Commerce, Print Culture, and the Authority of the State in American Copyright Law*, 9 *Am. Literary Hist.* 21 (1997). A full exploration of the original intent underlying the patent and copyright clause is a subject for another article.

¹⁵⁵ See Hardy, *supra* note 5, at 254-57; Merges, *Contracting Into Liability Rules*, *supra* note 5, at 1308-17; see Pierre Schlag, *The Problem of Transaction Costs*, 62 *S. Cal. L. Rev.* 1661, 1685-85 (1989). One could argue just as easily that it is the public that is the property owner, since the public stands in the relation of remainderman to the copyright "owner's" life (plus 50) tenancy, and since it is the public's remaindered interest that justified the creation of the life tenancy in the first place. See, e.g., *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991); *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975); *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 158 (1948); McGill, *supra* note 154 (concluding that historical evidence suggests copyright was originally conceived as a "temporary alienation of public property").

¹⁵⁶ See Hardy, *supra* note 5, at 222-29.

¹⁵⁷ See Hardy, *supra* note 5, at 220-28; see also Adelstein & Peretz, *supra* note 29, at 214-15, 234-35.

¹⁵⁸ See Merges, *The End of Friction?*, *supra* note 5, at 134-35; see also O'Rourke, *supra* note 49, at 696; *supra* text accompanying note 57; cf. Ginsburg, *supra* note 34, at 15 (endorsing Merges's description of fair use).

¹⁵⁹ See *supra* text accompanying notes 121-32.

by maximizing a work's prospective market value is equally unpersuasive. The cybereconomists cite no evidence that monetary reward is the sole source of inducement to create new works, and there is much to suggest that nonmonetary incentives are equally, if not more, important in some cases.¹⁶⁰

Second, and more significant, the argument from redistribution assumes that the author or publisher of a digital work has the right to pursue and control any monetary return that the work may be made to generate, and may claim "property" even in the inchoate possibility of monetary gain. From there, it is a short step to the conclusion that a regime that would prevent owners from exploiting emerging or even unforeseen markets enabled by new technologies is not only inefficient but also unjust. Yet this understanding of property is historically and theoretically contingent; it is neither a necessary nor an invariably efficient feature of a scheme of property--much less intellectual property--rights.

The understanding of property as the right to appropriate any possibility of profit dates from none other than the *Lochner* era. For most of the nineteenth century, jurists and legal scholars understood constitutionally-protected "property" to mean "vested" rights only.¹⁶¹ Legislation restricting prospective uses of property, if generally applicable, was presumptively legitimate.¹⁶² Gradually, however, as the growing variety of intangible, commercial interests made real property-based tests of ownership seem increasingly irrelevant, courts began to reconceive property as having an ahistorical, and thus implicitly

¹⁶⁰ See, e.g., *Princeton Univ. Press v. Michigan Document Servs.*, 99 F.3d 1381, 1410 (6th Cir. 1996) (en banc) (Ryan, J., dissenting) (summarizing testimony of numerous academic authors "that they write for professional and personal reasons" and "that the receipt of immediate monetary compensation such as a share of licensing fees is not their primary incentive to write"); cf. Breyer, *supra* note 26 (arguing that the additional incentive provided by copyright is not necessary to the survival of the book publishing and computer software industries); Weinreb, *supra* note 104, at 1232-33 (making the same argument); Edward L. Deci & Richard Flaste, *Why We Do What We Do: The Dynamics of Personal Autonomy* (1995) (summarizing empirical research showing that "[i]ntrinsic motivation is associated with richer experience, better conceptual understanding, greater creativity, and improved problem solving" than extrinsic motivation); Weinreb, *supra* note 104, at 1234-36 (same); John Kay, *The Economics of Intellectual Property Rights*, 13 *Intl. Rev. L. & Econ.* 337 (1993) (suggesting that in many cases the monetary value of a copyrighted work to the public will bear no relation either to the "moral worth" of the work or to the incentives that led the author to create it). The exact role that copyright plays in inducing production of creative and informational works is an unanswered empirical question.

Hardy argues that the motivations of those who create for nonmonetary reasons need not be factored into the incentives analysis because these individuals will continue to create new works regardless of changes in the law. See Hardy, *supra* note 5, at 221-22. This argument assumes, first, that works created solely for monetary reasons are as important to "progress" as other works. Given the vast number of important works produced within the college and university system, which operates under a different incentives structure, that assumption seems unwise. See Breyer, *supra* note 26, at 287, 309; cf. Lunney, *supra* note 6, at 561-69 (arguing that the copyright system perversely awards the greatest protection to the least valuable works); *infra* section III.B.1 (discussing the externalities generated by creative and informational works, and the consequent risk of underproduction of those works that are most socially valuable). It also ignores the possibility that changes in the legal rules governing access to and control of works, specifically those preventing or sharply limiting unpaid access by scholars and students, may alter existing social patterns of creation. See *infra* section III.B.1.

¹⁶¹ See Horwitz, *supra* note 22, at 150-51; Siegel, *supra* note 2, at 7-8; see also Robert Brauneis, "The Foundation of Our 'Regulatory Takings' Jurisprudence": The Myth and Meaning of Justice Holmes's Opinion in *Pennsylvania Coal Co. v. Mahon*, 106 *Yale L.J.* 613, 624-27 (1996); White, *supra* note 17, at 93-96.

¹⁶² See Benedict, *supra* note 2, at 304-05, 327-28; Brauneis, *supra* note 161, at 625; Siegel, *supra* note 2, at 7-8; *supra* text accompanying notes 18-23.

forward-looking, character derived from an "ideal boundary" between the owner and society.¹⁶³ Within this vision, property rights and freedom of contract were inextricably related. Both originated in the prepolitical sphere and thus outside public control.¹⁶⁴ Full enjoyment of one right necessarily entailed the other; interference with business was interference with property, and vice versa. In the line of cases that have come to be known as the *Lochner* cases, the Court used the rhetoric of contract and property interchangeably.¹⁶⁵ Social contract theory and notions of economic laissez faire thus combined to create a climate in which legislative interference with (definitionally) private control of economic resources was presumptively suspect.¹⁶⁶

The definition of intellectual property as profit potential also dates from the *Lochner* era. It has largely

¹⁶³ Brauneis, *supra* note 161, at 624-27, 630; see also Horwitz, *supra* note 22, at 145-51; Siegel, *supra* note 2, at 8-12, 64.

¹⁶⁴ See *supra* text accompanying notes 18-23.

¹⁶⁵ See, e.g., *Adkins v. Children's Hosp.*, 261 U.S. 525, 545 (1923) ("Included in the right of personal liberty and the right of private property--partaking of the nature of each--is the right to make contracts for the acquisition of property. Chief among such contracts is that of personal employment, by which labor and other services are exchanged for money and other forms of property." (quoting *Coppage v. Kansas*, 236 U.S. 1, 14 (1915)); *Truax v. Corrigan*, 257 U.S. 312, 328-30 (1921) (holding that statute prohibiting labor injunctions "deprives the owner of the business and the premises of his property without due process"); *Adair v. United States*, 208 U.S. 161, 172-73 (1908) (invalidating law barring firing of union members on ground that both employee and employer had rights of liberty and property to decide acceptable terms of employment); Brauneis, *supra* note 161, at 671; see also Epstein, *supra* note 4, at 280 ("Restrictions on hours or wages are without question limitations upon the power of the employer to dispose of property.").

¹⁶⁶ See Horwitz, *supra* note 22, at 145-51, 160-64 (demonstrating that abstraction and dephysicalization of "property," and increasing use of market expectation to define its scope, led to an "infinitely expandable" conception of property that arguably prohibited any restrictions on use). The contemporaneous legal realist attack on the expectation-based understanding of property is well documented in Horwitz, *supra* note 22, at 145-67. Among modern legal scholars, C. Edwin Baker and Frank Michelman, in particular, have challenged the understanding of "property" as denoting a zone of absolute freedom from interference with economic expectation. Michelman demonstrates that the Constitution designed by the framers reflects and was intended to serve distributive as well as antiredistributive concerns. Property was both a source of security against government and a precondition for the effective exercise of democratic self-government. See Frank I. Michelman, *Possession vs. Distribution in the Constitutional Idea of Property*, 72 *Iowa L. Rev.* 1319, 1325-34 (1987). To the extent that "exposure to superior private power can ... leave people without the material independence or competence required for effective citizenship," these conceptions of property are in tension, for "material independence" can be guaranteed only by government action that is in some formal sense redistributive. See *id.* at 1335-36. Michelman concludes that the constitutional law of property can best serve the political ideals embodied in the Constitution by finding a pragmatic way to mediate between the two conceptions. See *id.* at 1350.

Baker disaggregates "property" into the various functions it serves, and argues that any constitutionally cognizable right against government interference extends only to those functions essential to human liberty. See C. Edwin Baker, *Property and Its Relation to Constitutionally Protected Liberty*, 134 *U. Pa. L. Rev.* 741 (1986). He includes among these functions the use of one's property for one's own welfare and "personhood," but not its use to dictate the allocation of resources within society, or to control exchange relations with others. See *id.* at 744-73. Decisions regarding the rules for resource allocation--of which the rules of exchange are, properly speaking, a subset--are, he argues, "inherently collective" decisions. See *id.* at 749-50. In particular, because exchange confers a form of sovereignty over others, individuals have no liberty interest in unfettered rights of exchange. See *id.* at 752, 770. Baker identifies the "allocative" and "exchange" functions of property as central to the argument for a return to *Lochner*-style constitutional protection of economic liberty. See *id.* at 767-69, 774.

escaped comment that *International News Service v. Associated Press*,¹⁶⁷ in which the Court defined news as quasi-property based on a misappropriation theory, was a Lochner-era case.¹⁶⁸ INS concerned the copying of concededly uncopyrightable news items from publicly accessible bulletin boards maintained by Associated Press member newspapers. As in the contemporaneous "substantive due process" cases, the Court reasoned from the fact of marketability to the construct of property. Asserting that any other result would undercut incentives to gather the news, it held that the AP was entitled to prevent a competing news agency from reaping where it had not sown.¹⁶⁹ Automatically upon reaching this conclusion, the Court assigned to the AP what Hardy and Merges would recognize as a right protected by a property rule; it ordered that the competitor be enjoined from using the news at all without the AP's permission.¹⁷⁰ Although some courts have sought to limit INS--and avoid copyright preemption-- by imposing a requirement of competitive injury, such a requirement merely serves to underscore the fact that under the INS approach, property rights (which implicitly confer absolute control over use) are a function of economic expectation, rather than the reverse.¹⁷¹ The cybereconomists' appeal to incentives falls squarely within this tradition.

In the modern, nondigital world, property entitlements are not conceived quite so broadly. The right to control one's land does not include the right to create a nuisance, even if that would create the greatest profit, and the right to control one's apartment building does not include the right to discriminate on the basis of race.¹⁷² These limits, moreover, are entirely consistent with a variety of "law and economics" approaches to the underlying problems. Although the rule against uncompensated redistribution and the definition of property as profit potential are foundational principles of neoclassically-grounded economic analysis of law,¹⁷³ we might conclude that nuisance laws and antidiscrimination restrictions are justified

¹⁶⁷ 248 U.S. 215 (1918) ("INS").

¹⁶⁸ But cf. James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* 37-41 (1996) (discussing INS as archetype of the "commodity" approach to information); Horwitz, *supra* note 22, at 203 (describing INS as "a significant example of judicial efforts to come to terms with" the implications of an abstract, expectation-based understanding of property); Aoki, *supra* note 116, at 1314-32 (linking expansive approach to intellectual property rights to laissez-faire liberalism and its ideology of the primacy of private property).

¹⁶⁹ See *International News Serv.*, 248 U.S. at 239-40.

¹⁷⁰ See *International News Serv.*, 248 U.S. at 245-46. The property rule was of limited duration--the injunction prohibited the competitor from appropriating the news while it still had economic value to the AP--but it was a property rule nonetheless.

¹⁷¹ See, e.g., *National Basketball Assn. v. Motorola, Inc.*, 105 F.3d 841, 852-54 (2d Cir. 1997); *United States Golf Assn. v. St. Andrews Sys.*, 749 F.2d 1028, 1037-38 (3d Cir. 1984); Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutory Impulse*, 78 Va. L. Rev. 149, 178-79 (1992) (criticizing the INS Court's equation of "value" with "property").

¹⁷² See 42 U.S.C. § 3604 (1994); Restatement (Second) of Torts §§ 821D, 822; cf. Fisher, *supra* note 38, at 31-33 (describing rationales for legal imposition of "compulsory terms" in contracts, including those relating to the use of private property).

¹⁷³ Formally speaking, the touchstone of neoclassical analysis is the Pareto criterion, and the requirement of Pareto-optimality is anti-redistributive by definition, in that no one may be made worse off than before. See, Cooter & Ulen, *supra* note 25, at 12; Calabresi, *supra* note 104, at 1215. In practice, this criterion has been relaxed by adoption of the Kaldor-Hicks test, which allows redistributive policies that increase overall social welfare if the gainers could compensate the

because the negative externalities the prohibited conduct would impose outweigh any incremental benefit derived from increased incentives.¹⁷⁴ Alternatively (stepping now into the institutionalist mainstream), if in our view the efficient society is one without housing discrimination or air pollution, we might conceive of "property" simply as not including the right to discriminate or the right to pollute.¹⁷⁵ Hardy and Merges do not consider whether either analysis might apply to digital works.¹⁷⁶ Their maximum-incentives thesis is simply the Lochner-era stricture against redistribution of profit potential translated into economic terms.

The argument against redistribution of profit potential effectively precludes recognition of a societal interest in limiting author/owner control of things denominated "property." Self-evidently, this broad property-as-profit rule protects the status quo distribution of entitlements and wealth; a right insulated by a penumbra of monetary expectation will be relatively impervious to legislative change.¹⁷⁷ The scope of such a property right can only expand. Thus, this understanding of property inevitably enables the aggrandizement of existing entitlements—more often than not at the expense of third parties whose current practices or privileges, because not considered "property," are not perceived as obstacles.¹⁷⁸ The cybereconomists justify their proposed regime as a mere efficiency enhancement that will improve the position of some at no detriment to others.¹⁷⁹ The fact of controversy, however, tends to suggest otherwise; if the proposed

losers, whether or not compensation is actually paid. See Cooter & Ulen, *supra* note 25, at 41-42; Calabresi, *supra* note 104, at 1221-22; Hovenkamp, *supra* note 98, at 65-67. As to wealth transfers designed to benefit the poor (inevitably the Kaldor-Hicks losers), practitioners of neoclassically-grounded, Chicago school law and economics argue that courts should not attempt such transfers because legislative wealth transfers are more efficient. See, e.g., Louis Kaplow & Steven Shavell, *Why the Legal System is Less Efficient Than the Income Tax in Redistributing Income*, 23 *J. Legal Studies* 667 (1994). When confronted with redistributive legislation, however, they then argue that legislation is inefficient for the reasons demonstrated by public choice theory, see *supra* text accompanying notes 97-101, and that only the common law as enforced by judges is truly efficient. See, e.g., Richard A. Posner, *Economic Analysis of Law* §§ 8.1-.3, 19.1-.3 (4th ed. 1992). Moreover, both in theory and increasingly in practice, such uncompensated, legislatively-sanctioned transfers stop at the boundaries of entitlements classified as "property." See, e.g., *Dolan v. City of Tigard*, 512 U.S. 374 (1994); *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992); *Nollan v. California Coastal Commn.*, 483 U.S. 825 (1989); *First English Evangelical Church v. Los Angeles*, 482 U.S. 304 (1987).

¹⁷⁴ See Polinsky, *supra* note 150, at 1080-85.

¹⁷⁵ Cf. Baker, *supra* note 166, at 759, 767-69 (arguing that constitutional protection should not extend to those aspects of property that would determine the allocation of resources, or "would affect the social world in a manner that make other people's contrary choices irrelevant"); Dan Thu Thi Phan, Note, *Will Fair Use Function on the Internet?*, 98 *Colum. L. Rev.* 169, 214 (1998) ("Thinner property rights do not mean the divestiture of all ownership The law recognizes that property, like copyright, is described and circumscribed by a set of societal concerns"). Such a choice presupposes a non-market-based approach to specifying the relevant social welfare function. On that question, see *infra* section III.B.2.

¹⁷⁶ For a preliminary analysis of the effects of externalities in information markets and their implications for design of the socially efficient bundle of entitlements in digital works, see *infra* section III.B.

¹⁷⁷ See Horwitz, *supra* note 22, at 145-51 (delineating necessary implications of an expectation-based theory of property rights); cf. Baker, *supra* note 166, at 751-53 (arguing that a broad conception of "property" confers sovereignty on property owners); Brauneis, *supra* note 161, at 700 ("The problem with continuity is that it equally preserves the wicked and the good."); Gordon, *supra* note 171, at 179 ("[P]aralysis, rather than increase in social wealth, more likely will result from granting rights against any change that may cause harm to someone."); Michelman, *supra* note 166, at 1335-36 (same).

¹⁷⁸ See Samuels, *Further Limits*, *supra* note 36, at 447-49.

¹⁷⁹ See, e.g., Bell, *supra* note 5, at 585-90.

change were really Pareto-optimal, there would be no reason for anyone to oppose it.¹⁸⁰ Disputes over proposed changes arise precisely because some such changes do impose costs; they are not movements toward the Pareto frontier but movements along it, with (re)distributive consequences.¹⁸¹

Digital works are a case in point. Hardy's "pie" is incomplete, in that it omits the slice consisting of "no-protection," or entitlements belonging to the public--a slice not currently conceived as "property" in the same sense as the interest belonging to the copyright owner. Consequently, he need not consider that his other three slices--legal entitlements, contracts, and special-purpose technical restrictions--are expanding at the public's expense, rather than simply compensating for the lower protection afforded by the "state-of-the-copying-art."¹⁸² Invoking the anti-redistributive animus that characterized the *Lochner* era obscures the fact that the redistribution worked by digital rights management technology, and advocated by its defenders, is from the public to copyright owners, not the other way around.¹⁸³ There is a constituency that would be damaged if Hardy's proposals were adopted-- and, hence, a need for Bell's argument that information that costs money is cheaper than information that does not.¹⁸⁴ The Emperor's new clothes are wondrous, indeed.

In a sense, however, characterization of a new technology or legal rule as redistributive is question-begging. Redistribution cannot be defined without reference to initial entitlements, and it is nearly always the scope of those entitlements that is contested.¹⁸⁵ The rhetoric of redistribution simply masks the underlying dispute. Thus, for example, copyright owners contend that they have always had the legal right to prevent private noncommercial copying, but could not enforce it; educational and library organizations counter that in fact copyright owners have never had this right and cannot enforce a nullity.¹⁸⁶ But (as

¹⁸⁰ See Calabresi, *supra* note 104, at 1220. Arguably, interested parties might oppose Pareto-optimal changes if they felt they could do even better by petitioning the relevant legislative body for special favors. This argument, however, is unlikely to be fruitful as long as it leaves the central question-- how to tell when parties are engaged in "rent-seeking"-- unaddressed. See *supra* text accompanying notes 112-16.

¹⁸¹ See Calabresi, *supra* note 104, at 1229-31.

¹⁸² Hardy, *supra* note 5, at 226-28; see, e.g., Litman, *The Exclusive Right*, *supra* note 100, at 40-43; Samuelson, *supra* note 9, at 134.

¹⁸³ The cybereconomists' focus on price discrimination lends further support to this conclusion. See, e.g., Bell, *supra* note 5, at 589 n.142; O'Rourke, *Copyright Preemption*, *supra* note 5, at 62, 70-71; see also Goldstein, *supra* note 28, at 8; Demsetz, *supra* note 143, at 301-04 (advocating price discrimination as a tool for enabling the private production of public goods such as information); cf. Fisher, *supra* note 38, at 25-30, 35-36 (arguing that price discrimination by copyright owners will enhance social welfare in many, though not all, cases). "Price discrimination" is nothing more than a technique by which a producer may attempt to capture all of the consumer surplus generated by a particular product. "In the ideal case of perfect price discrimination, every customer is charged her maximum willingness to pay for the items she purchases." Meurer, *supra* note 38, at 869; see also *id.* at 877 (predicting that digital rights management technologies "will create a windfall of profit for copyright holders"); Bell, *supra* note 5, at 589 n.142. The key underlying assumption--that it is good policy to allow producers of creative and informational works to do this--goes unquestioned.

¹⁸⁴ See *supra* text accompanying notes 41-42.

¹⁸⁵ See Goldberg, *supra* note 104, at 122-23.

¹⁸⁶ Compare, e.g., Hearing on H.R. 2281 & 2280, *supra* note 33, at 204- 12 (statement of Allan R. Adler, Vice President for Legal and Governmental Affairs, Association of American Publishers), and NII White Paper, *supra* note 9, at

Hardy and Merges recognize) the debate about rights in digital works is not about what rights members of the public have had in the past, although that information is certainly relevant as evidence of social values and preferences. It is about what rights they should have in the future.

Here it is worth returning to Ostrom's careful distinction between common-pool resources and public goods.¹⁸⁷ True public goods, once created, are not scarce, yet the cybereconomists propose to treat them as if they were. What could possibly justify such an approach? The answer, quite simply, is that scarcity is a precondition for markets.¹⁸⁸ Copyright owners wish to create markets for all ratable uses of digital works. Therefore, creative works, which until now have defied the commodification that is the cornerstone of a market-based system, must become commodities.¹⁸⁹

Calling something a commodity, however, does not necessarily make it one. To begin with, the market and the law must confront the insuperable difficulty of determining exactly what is owned. To the extent that creativity is cumulative, it eludes attempts to set authorial or ontological boundaries.¹⁹⁰ Put differently, the boundaries of the authorial work and the literal boundaries of the copy that embodies it do not coincide; the latter encompass much that the former do not. Facts, ideas, and unoriginal constructs incorporated into a work remain part of the public domain.¹⁹¹ From an instrumental perspective, moreover, the commodity approach to digital intellectual property is substantially at odds with the reason for protecting creative works. The "progress" justification for copyright is not neutral as to issues of creative merit.¹⁹² (Although

14-17, 73-84, with, e.g., Hearing on H.R. 2281 & 2280, *supra* note 9, at 243 (statement of Douglas Bennett, President, Earlham College, on behalf of the Digital Future Coalition), Digital Future Coalition, Collected Position Papers, Letters, and Press Releases, (visited Sept. 24, 1998) <<http://www.dfc.org/>>, Litman, *The Exclusive Right*, *supra* note 100, at 40-43, Samuelson, *supra* note 9, and Richard Stallman, *Reevaluating Copyright: The Public Must Prevail*, 75 *Or. L. Rev.* 291 (1996). See also Jessica Litman, *Reforming Information Law in Copyright's Image*, 22 *U. Dayton L. Rev.* 587, 596-97 & n.52 (1997).

¹⁸⁷ Or, more precisely, scarcity is a precondition for property, which is a precondition for markets. See, e.g., Cooter & Ulen, *supra* note 25, at 10; Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, 1 *Economica* 30, 31 (1934) ("[P]roperty rights in patents and copyrights make possible the creation of a scarcity of the products appropriated which could not otherwise be maintained.").

¹⁸⁸ See G.J. Mulgan, *Communication and Control: Networks and the New Economies of Communication* 119-20 (1991) ("To be a tradeable good, which adds value and offers return on investment, information must behave like a commodity."); Rice, *Public Goods*, *supra* note 70, at 562 ("Contract creates scarcity and enforcement of contract corrects for inherent non-excludability."); see generally Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* 71-73 (1944) ("The commodity fiction ... supplies a vital organizing principle in regard to the whole of society ... namely, the principle according to which no arrangement or behavior should be allowed to exist that might prevent the actual functioning of the market mechanism on the lines of the commodity fiction.").

¹⁸⁹ See Boyle, *supra* note 168, at 51-58; Peter Jaszi, *Toward a Theory of Copyright: The Metamorphosis of "Authorship"*, 1991 *Duke L.J.* 455; Lange, *supra* note 49, at 147; Litman, *supra* note 6.

¹⁹⁰ The cybereconomists do not appear to challenge this longstanding principle.

¹⁹¹ See U.S. Const. art. I, § 8, cl. 8; Margaret Chon, *Postmodern "Progress": Reconsidering the Copyright and Patent Power*, 43 *DePaul L. Rev.* 97 (1993). According to Chon, at its origin copyright was premised in part on the notion that there exist objective criteria of a work's intrinsic merit. See *id.* at 114-22. Chon rejects this notion, but also rejects market-based criteria of value. Instead, she offers a "post-modern" view of the progress criterion as shaped by social practices and human needs. See *id.* at 123-44; see *infra* text accompanying notes 363-74 (exploring the non-market dimensions of progress).

¹⁹² See, e.g., *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251-52 (1902):

It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of

courts eschew judgments of artistic merit in determining copyrightability, or at least say they do, this merit-neutral stance is expressly intended to serve meritocratic as well as market ends.¹⁹³) It follows that the sole test of a work's merit is not its success in the market, and that prospects for success in the market are not the sole determinant of a work's publishability.¹⁹⁴ Thus, the market must contend with the recurring assertion of non-commodity definitions of value.

As Karl Polanyi demonstrated more than fifty years ago, commodity constructs are apt to prove uncooperative when applied to "fictitious commodities"-- factors incompletely determined by commodity attributes.¹⁹⁵ Such constructs make markets possible, but simultaneously introduce tension into the market system. Where the harsher consequences of commodification are unacceptable, society attempts to introduce stabilizing measures--for example, minimum wage laws and/or welfare grants to mitigate the starvation that serves as incentive to labor; rent control laws to lessen the impact of the laws of supply and demand on the housing market; and fair use privileges to prevent the commodification of creative works from impoverishing education and public debate.¹⁹⁶ These countermeasures in turn incur criticism for their disruptive effect on the market and their inconsistency with market principles.¹⁹⁷

The resulting debate, however, cannot resolve the underlying tension, because it is focused on the welfare measure and never really addresses the initial determination to commodify. One need not be clairvoyant to foresee a similar reaction to Merges's proposed "redistributive" fair use exemption for favored classes

pictorial illustrations, outside of the narrowest and most obvious limits. At the one extreme some works of genius would be sure to miss appreciation. Their very novelty would make them repulsive until the public had learned the new language in which their author spoke. It may be more than doubted, for instance, whether the etchings of Goya or the paintings of Manet would have been sure of protection when seen for the first time. At the other end, copyright would be denied to pictures which appealed to a public less educated than the judge.

Cf. Alfred C. Yen, *Copyright Opinions and Aesthetic Theory*, 71 S. Cal. L. Rev. 247 (1998) (showing that judges in copyright cases do in fact make judgments about artistic merit, and arguing that these judgments and the standards that inform them should be expressly acknowledged).

¹⁹³ For further discussion of the limitations and potential consequences of relying solely on the market to measure the value of creative and informational works, see *infra* text accompanying notes 332-42.

¹⁹⁴ Polanyi, *supra* note 189, at 71-75. Polanyi wrote:

¹⁹⁵ Now, in regard to labor, land, and money such a postulate cannot be upheld. To allow the market mechanism to be sole director of the fate of human beings and their natural environment ... would result in the demolition of society. For the alleged commodity "labor power" cannot be shoved about, used indiscriminately, or even left unused, without affecting also the human individual who happens to be the bearer of this peculiar commodity. In disposing of a man's labor power the system would, incidentally, dispose of the physical, psychological, and moral entity "man" attached to that tag.

Id. at 73; see also Solo, *supra* note 36, at 55-56 (characterizing land, labor, and capital as the "disappearing quanta" of the neoclassical model); Radin, *supra* note 64, at 107-10 (characterizing regulation of the labor and housing markets as a socially enforced "incomplete commodification" intended to preserve a space for human flourishing).

¹⁹⁶ See 17 U.S.C. § 107 (1994); Polanyi, *supra* note 189, at 77-110; Radin, *supra* note 64, at 108; Fisher, *supra* note 26, at 1768-74.

¹⁹⁷ See Polanyi, *supra* note 189, at 77-110; Radin, *supra* note 64, at 108; see also, e.g., *Lochner v. New York*, 198 U.S. 45 (1905); NII White Paper, *supra* note 9, at 84; Bell, *supra* note 5, at 607-08; cf. O'Rourke, *supra* note 49, at 696 (noting that eligibility for Merges's proposed "redistributive" fair use exemptions will need to be determined in part by non-economic factors).

of users if the cybereconomists' proposals succeed, nor to predict that no resolution of that issue will be fully satisfying as long as the tension underlying the commodification of creative works remains unaddressed.¹⁹⁸ A successful intellectual property regime must mediate the tension between commodity and non-commodity definitions of value in creative works, not ignore it.

Incentives to create and limits on author/owner control are not mutually exclusive, as the argument from redistribution might lead one to think. Rather, they are complementary means for triangulating "progress." The trick is to balance the two, and neither assertions about redistribution nor formulaic prescriptions for maximizing allocative efficiency will help us.¹⁹⁹ The cybereconomists' arguments about the superiority of common-law property rules are dictated by their initial assumptions about what "property" is and ought to be. A useful economic model for digital intellectual property rights must begin elsewhere.

* * *

Their claims of economic certainty notwithstanding, the cybereconomists fall well short of demonstrating that a private-property-and-contract-based regime of rights in digital works would best promote access and progress. To decide whether a particular goal is best served in the "public" or the "private" (i.e., market) arena, we must assess so-called market institutions in their real-world, demonstrably imperfect forms, and must weigh the full range of possible alternatives. To begin that inquiry by presupposing voluntary particularized consent to standard form contract terms and presuming the illegitimacy of (further) legislative intervention--just as the *Lochner* Court presumed voluntary, particularized consent to restrictive labor contracts and conceived legislated labor standards as the product of interest-group pressure--is to predetermine the result. Similarly, the argument for undivided entitlements proceeds from economic ideology, not logic or neutral science. Because they begin with a particular, contingent understanding of "property," the cybereconomists do not consider whether other models might be more effective at inducing production and dissemination of public goods generally and creative and informational works in particular. As currently constituted, the economic case for recognizing unlimited contract rights and undivided entitlements in digital works is weak. More is required to justify abandoning the public law of copyright. Part III attempts to lay the groundwork for a richer, more contextualized understanding of the relationship between legal institutions and information markets.

III. On Modeling Information Markets

As we have seen, reliance on essentialized notions of "contract," "market," and "property" elides important empirical and policy questions about the extent of the monopoly that society should afford creators of digital works--questions that a more sophisticated model would consider. This is not necessarily an argument against the utility of the economic analysis of law, but an argument that law and economics in the

¹⁹⁸ See *supra* text accompanying note 57.

¹⁹⁹ Cf. Lawrence Lessig, *Intellectual Property and Code*, 11 *St. John's J. Legal Comment.* 635, 638-39 (1996) ("Sufficient incentive,' ... is something less than 'perfect control.' ").

neoclassical mode is too narrow and far too simplistic to yield a meaningful solution to the problem of digital copyright. If it is to be undertaken, the economic analysis of copyright law should draw on the full panoply of resources that the discipline of economics has to offer.²⁰⁰

The field of economics is not monolithic, and the neoclassical market model is, as one might expect, only part of the story. Merges likens the new digital CMS regimes to a frictionless, or "Newtonian" system of licensing rights in digital works.²⁰¹ This metaphor is more apt than he may have realized. Newtonian mechanics dominated scientific thinking for two and a half centuries--coincidentally, the same period during which the classical liberalism of the Enlightenment flourished.²⁰² The Newtonian paradigm, however, proved insufficiently complex to describe the real world, and eventually was displaced by the more precise constructs supplied by Einstein, Heisenberg, and others.²⁰³ Similarly, the received wisdom of neoclassical economic theory is (and has long been) under challenge on many fronts, including several of potential relevance to the market for digital information.

The project of constructing an adequate economic model for digital intellectual property rights is complex. As Part II suggests, the model must address two related sets of questions. First, it must determine whether the existing consumer mass market offers the best forum for defining information policy and establishing the scope of entitlements in digital works.²⁰⁴ Section III.A analyzes digital rights management contracts and technologies in context, as the latest move in an ongoing contest between content owners and consumers regarding endogenous definition and enforcement of the legal entitlements and exemptions provided by copyright law. Given the predominantly reactive nature of consumers' power in the market, the inexorable nature of this particular enforcement technique, and the institutional constraints imposed by standard form contracting law and practice, it concludes that consumers are more likely to experience a relative equality

²⁰⁰ See Hadfield, *supra* note 26, at 43-45 (observing that the modern literature on the economics of copyright has not tackled the problem of developing a rigorous alternative to the Demsetz model); cf. Robert Ashford, *Socio-Economics: What Is Its Place in Law Practice?*, 1997 *Wis. L. Rev.* 611, 612-15; Neil K. Komesar, *Exploring the Darkness: Law, Economics, and Institutional Choice*, 1997 *Wis. L. Rev.* 465, 466-67. Arguably, a more interdisciplinary, contextualized approach to the economic analysis of law simply returns the field to its roots in the work of the legal realists and institutional economists of the 1920s and 1930s. See Hadfield, *supra* note 26, at 36-39 (discussing an alternative strand in the economic literature on copyright that traces back to the work of Arnold Plant, who focused on the relation between copyright and overall social welfare (citing Arnold Plant, *The Economic Aspects of Copyright in Books*, 1 *Economica* 167 (1934))); see also Victor P. Goldberg, *Commons, Clark, and the Emerging Post-Coasian Law and Economics*, 10 *J. Econ. Issues* 877 (1976); Steven J. Medema, *Wandering the Road from Pluralism to Posner: The Transformation of Law and Economics in the Twentieth Century*, 30 *Hist. Pol. Econ.* (forthcoming 1998).

²⁰¹ See Merges, *The End of Friction?*, *supra* note 5, at 136.

²⁰² See J.L. Heilbron, *Elements of Early Modern Physics* 2-11 (1982). Perhaps this is less coincidental than it appears. A focus of debate in the emerging school of socio-economics is the extent to which the scientific method can survive the reductivism characteristic of neoclassical economics. See, e.g., Ashford, *supra* note 200.

²⁰³ See Daniel J. Kevles, *The Physicists: The History of a Scientific Community in Modern America* 155-69 (1977); see generally Thomas S. Kuhn, *The Structure of Scientific Revolutions* (2d ed. 1970). The process of paradigm revision in the field of physics is ongoing. See David Lindley, *The End of Physics* (1993).

²⁰⁴ As used here, "best" simply means the process most likely to yield the results that the parties want, or a mutually acceptable compromise.

of bargaining power in the legislative arena. This suggests that consumers would do well to be skeptical of proposals for allocating rights in digital works within the parameters set by the existing market.

The second set of questions that the model must address concerns the relationship between creative and informational works and social welfare. What kinds of value do such works generate? Even if the market process is otherwise fair, are market measures the most accurate means for assessing and optimizing creative and informational works' overall value to society? Section III.B analyzes the uncompensated positive externalities produced by transactions in creative and informational works, and concludes that these externalities represent a significant source of social value and that many (if not most) of them would be underproduced by a fully market-based regime. The choice between that world and the one we have now has profound implications for the processes of individual and collective development and self-definition. Many of these processes occur outside the market, in ways the market cannot measure. It follows that we should not make the choice between a fully market-based regime and a regime of incomplete entitlements without considering the nonmarket as well as the market preferences of citizen-consumers.

A. Bargaining Power and Choice in Information Markets

Just as Einstein challenged the Newtonian model by recognizing the dimension of time, institutional, welfare-theoretic, and political economists have challenged the neoclassical paradigm of the market as the realm of unconstrained private choice by recognizing the dimension of power. In the neoclassical model, power--whether over people or over markets--is absent. Exchanges of all types are presumed to be voluntary; departures from this norm are called "market failures" and are presumed to be rare. For an increasing number of modern economic theorists, in contrast, both forms of power are endemic to capitalist market systems.²⁰⁵ From this perspective, an intellectually defensible market model must acknowledge and inquire about power asymmetries and their consequences in both market and legislative arenas, and a socially defensible information policy must take power asymmetries into account. In the context of mass-marketed digital works, this inquiry suggests that consumers are likely to be disadvantaged in either arena, but that the disadvantages that consumers encounter in the legislative forum are less insurmountable.

1. Contested Exchange and the Power to Switch

A central tenet of neoclassical economic theory is that consumers have freedom to enter and exit markets for consumer goods. As a consequence, if consumers refuse to buy a particular product or service, producers will reconfigure the product or service--by lowering the price, by changing product attributes,

²⁰⁵ See, e.g., Bartlett, *supra* note 102, at 66-68, 195-96, 204-06; Samuel Bowles & Herbert Gintis, *Democracy and Capitalism* (1986); Samuel Bowles & Richard Edwards, *Understanding Capitalism: Competition, Command and Change in the U.S. Economy* 16-18 (1985); John Kenneth Galbraith, *The Anatomy of Power* (1983); Papandreou, *supra* note 132, at 216; A. Allan Schmid, *Property, Power, and Public Choice: An Inquiry into Law and Economics* (1978); William M. Dugger, *Power: An Institutional Framework of Analysis*, 14 *J. Econ. Issues* 897 (1980); Samuels, *Further Limits*, *supra* note 36. A universally-accepted lexicon for describing and theorizing about power has yet to emerge, however.

or by some combination of the two--in order to maximize profits.²⁰⁶ Thus, consumer preferences exercise considerable, if indirect, power over the overall pattern of supply. As section II.A discussed, the cybereconomists (and at least one court sympathetic to their project) extend this model to the terms and conditions imposed by digital CMS, and argue that copyright owners will abandon or modify terms to which consumers refuse to agree.²⁰⁷ However, they overstate the actual extent of consumer knowledge and consent. The legal rules governing such exchanges make it difficult for consumers of mass-marketed products and services to act like the rational, utility-maximizing comparison shoppers that the model presumes. Understanding the power dynamics of information markets requires a more nuanced, context-specific approach, one that takes into account the complexity of information products and transactions, the limited range of roles available to consumers, and the ways in which existing legal and market institutions further constrain those roles.

One promising avenue of inquiry is the theory of "contested exchange" developed by political economists Samuel Bowles and Herbert Gintis. Bowles and Gintis challenge the neoclassical assumption of perfect, costless, exogenous enforcement of market exchanges by identifying certain types of exchange for which such enforcement is infeasible. Of particular relevance here are exchanges in which "the contested attribute can be measured only imperfectly or at considerable cost" and those in which "the number of contingencies concerning future states of the world relevant to the exchange preclude writing a fully specified contract."²⁰⁸

Such exchanges, they reason, will be contested, meaning that the party concerned with a particular attribute or contingency will develop or attempt to develop endogenous mechanisms of enforcement. For example, to extract the desired work effort from an employee, an employer may make continued employment contingent on a satisfactory level of performance.²⁰⁹

Endogenous enforcement activities do not invariably signal a power imbalance. First, such activities may be mutual. Robert Ellickson's model of norm enforcement among neighbors in close-knit communities is an example of this situation, which Bowles and Gintis term "bilateral power."²¹⁰ Second, unilateral endogenous enforcement will fail if the other party (for example, the employee) is indifferent as to this particular exchange (for example, continued employment versus losing this particular job), as the

²⁰⁶ In its purest form, neoclassical economic theory is centrally concerned with price and its responsiveness to supply and demand. See *supra* note 36. Law and economics in the neoclassical mode modifies this model by positing that changes in other terms of the exchange will be reflected in the good's price. As Neil Netanel observes, however, the price model has often proved too simple and narrowly focused to bear the weight of "complex real- world public policy issues." Netanel, *supra* note 36, at 311 n.113. See also *supra* text accompanying note 88 (discussing the information problems that undermine efforts to evaluate non-price contract terms).

²⁰⁷ See *supra* text accompanying notes 65-94; Bell, *supra* note 5, at 588-89, 601-08; O'Rourke, Copyright Preemption, *supra* note 5, at 81-90.

²⁰⁸ Samuel Bowles & Herbert Gintis, *Contested Exchange: New Microfoundations for the Political Economy of Capitalism*, 18 *Pol. & Socy.* 165, 177 (1990).

²⁰⁹ See *id.* at 177-78.

²¹⁰ *Id.* at 184; see Robert C. Ellickson, *Order Without Law: How Neighbors Settle Disputes* (1991).

neoclassical model presumes.²¹¹ Bowles and Gintis demonstrate that, at least in the labor market, this is not the case.²¹² Most workers are not indifferent to losing their jobs, and this indicates a power asymmetry between employer and employee. The employer, who is on the short side of a nonclearing labor market, has power over the employee and may use the threat of sanctions to affect his or her behavior; generally speaking, employees lack equivalent power to dictate the terms of the exchange.²¹³

From the copyright owner's perspective, transactions in digital works are contested exchanges. It is impossible to know how individuals will use works, and often difficult to predict how copyright standards such as fair use will apply. Using the legal system to police all uses of copyrighted works would be infeasible because of the great expense and difficulty of monitoring individual use. Digital rights management contracts and technologies are the prototypical endogenous enforcement mechanism, and there do not seem to be comparable enforcement mechanisms available to most consumers.²¹⁴

Assessing the distribution of power in information markets is more difficult. As noted above, the conventional economic wisdom regarding producer/consumer markets holds that, at least when there are no limits on the quantity of goods produced (indisputably the case where digital works are concerned), consumer purchasing behavior disciplines the market.²¹⁵ Gintis himself has characterized this "power to switch" as a critical determinant of power in the market for consumer goods, and has argued that mass-market transactions are best understood as contested exchanges in which the contested attribute is

²¹¹ At a given price, the level of indifference between this particular transaction and any other transaction will be a function of the substitutability of other products or services--i.e., whether and to what extent the subject matter of the transaction is uniquely suited to meet the buyer's needs--and of the elasticity of demand for the subject matter of the transaction--i.e., whether demand is a linear correlate of price or is driven by other factors, such as hunger or the need for shelter. See Cooter & Ulen, *supra* note 25, at 24; see *infra* text accompanying notes 218-26.

²¹² See Bowles & Gintis, *supra* note 208, at 178-81.

²¹³ See *id.* at 182-83. A nonclearing market exists when some participants who wish to transact at the market price cannot do so, and the market does not respond by adjusting to a point at which supply equals demand. See *supra* note 36. For example, the persistence of unemployment in the labor market, despite willingness of the unemployed to work at--or even below--the market wage, indicates failure to clear. See Bowles & Gintis, *supra* note 208, at 172-81. Because "[n]o actor is capable of improving his or her position by altering a variable over which he or she has control," the market is in competitive equilibrium; however, neoclassical assumptions about the relationship between supply and demand at the equilibrium point do not hold. See *id.* at 182. The party in the favorable position in a nonclearing market is on the "short side" of the market. See *id.* at 183. In labor markets, this party usually will be the employer; however, some classes of employees--for example, highly skilled professionals in a growth sector of the market--may wield short side-power. See, e.g., Amy Harmon, *Vacant Cubicles--A Special Report: Software Jobs Go Begging, Threatening Technology Boom*, *N.Y. Times*, Jan. 13, 1998, at A1.

²¹⁴ Some consumers, of course, are likely to respond by attempting to develop technological means of their own to defeat digital CMS. Recently, copyright owners attempted to convince Congress to declare all such circumvention technologies illegal. That struggle and its implications for the contested exchange model offered in this Article are discussed *infra* in section III.A.2.

²¹⁵ See, e.g., Herbert Gintis, *The Power to Switch*, in *Unconventional Wisdom: Essays on Economics in Honor of John Kenneth Galbraith* 65 (Samuel Bowles et al. eds., 1989); *supra* note 206. Depending on the product and the range of available alternatives, consumer behavior may be slightly more complex. Where there are few close substitutes for a product, or where consumers have a degree of product loyalty, consumers initially may prefer "voice" to "exit." See generally Albert O. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (1970).

product quality and consumers have short-side power.²¹⁶ In fact, there is some indication that copyright owners are nervous about their ability to impose technological controls to the full extent that they would like.²¹⁷ A preliminary inquiry suggests that it is too early for unqualified optimism, however.

First, the extent of consumer indifference to particular transactions in creative and informational works is an empirical question that requires investigation. It may be incorrect to assume that the market in copyrighted works behaves like the markets for consumer goods such as bread, toothpaste, and vacuum cleaners--or, at least, to assume this in all cases.²¹⁸ Arguably, some works are more interchangeable, and some types of consumers more discriminating, than others. Consumers of popular fiction, for example, may recognize more substitutability than consumers of academic works--or perhaps that is gross elitism, and perhaps far less substitutability exists among, say, the works of Jackie Collins, Danielle Steel, and Judith Krantz than among the hypertrophic byproducts of the tenure process. The point is that there is insufficient information from which to generalize either that the market for creative and informational works exhibits a high degree of substitutability or that it does not.²¹⁹ The elasticity of demand for information products also is an open question, and may well vary for different types of works or different types of content.²²⁰ Even where consumers are indifferent as between two different works of the same general type, such as newspapers, romance novels, or word processing programs, they may feel it important to purchase some work that falls within that category. Further research is needed to determine whether and to what extent demand for creative and informational works is independent of their market price.

²¹⁶ See Gintis, *supra* note 215.

²¹⁷ See Burns, *supra* note 5, at 16, 36.

²¹⁸ Cf. Elkin-Koren, *supra* note 6, at 110 (arguing that copyrighted works should not be treated as interchangeable commodities in economic models).

²¹⁹ It is worth noting that the public-goods rationale for copyright protection accepts that granting the copyright monopoly will result in a certain amount of "deadweight loss"--that is, that there will be consumers who wish to transact in the work, but at a price lower than the monopoly price. See, e.g., Elkin-Koren, *supra* note 6, at 99. In other words, the right to charge supracompetitive prices is built into the structure of the market for copyrighted works. It has been argued that this statutory monopoly usually does not translate into market power in the economic sense, and current antitrust policy reflects this belief. See Guidelines of Apr. 6, 1995, 4 Trade Reg. Rep. (CCH) P 13,132, at 20,734; Bell, *supra* note 5, at 588-89 n.142; Note, Clarifying the Copyright Misuse Defense: The Role of Antitrust Standards and First Amendment Values, 104 Harv. L. Rev. 1289, 1298-99 (1991). However, the question requires further study. What is the relevant market? How is the substitutability of intellectual products to be judged? Is any one book about American history, or any one Pulitzer Prize-winning novel, or any one comic book, as good as any other? For a preliminary exploration of these questions, see Fisher, *supra* note 26, at 1700-03.

²²⁰ Researchers investigating consumer responses to an eight-month-long newspaper strike in Pittsburgh, Pennsylvania, found that some of consumers' informational needs were filled by other news media, particularly television. Thus, for example, consumers felt themselves to be well-informed about the candidates in the upcoming presidential and senatorial elections. They were less aware, however, of candidates for congressional seats and of local news, sports, and cultural events. See Jeffrey J. Mondak, Nothing to Read: Newspapers and Elections in a Social Experiment 61-67 (1995); Associated Press, Missing News: Pittsburgh Readers Weather Newspaper Strike, St. Louis Post-Dispatch, July 12, 1992, at E4; Bob Hertz, Pirates Merely a Rumor: In Pittsburgh, Newspaper Strike Has Cut Flow of Information, San Francisco Examiner, Oct. 9, 1992, at E3; Reuters, Bad News: Pittsburgh Mourns Loss of City's Struck Papers, St. Louis Post-Dispatch, Aug. 27, 1992, at 3B. In light of my arguments about the constrained nature of consumer sovereignty, *infra* text accompanying notes 221-50, it is worth noting that the strike directly affected only one of Pittsburgh's two major daily newspapers. Pursuant to a previous agreement, the other newspaper suspended publication during the strike. See Jeff Barker, Pittsburgh Copes With Life Without Newspapers: Gaps Are Filled During Strike in Subtle, Significant and Bizarre Ways, Buffalo News, Sept. 6, 1992, at A7.

There is also insufficient information from which to conclude that, in a mature market, vendors of substitutable products will compete to offer less restrictive access terms. In rapidly evolving markets, such as the market for personal computing software, new entrants can gain substantial market share by offering their products without copy-protection, or as unrestricted shareware.²²¹ In sharp contrast, although the two dominant providers of online legal reference materials, West and Mead Data Central, compete vigorously on price and service, they seem to have a firm sense of their shared interest regarding more serious matters such as the scope of subscribers' contractual rights to use and reuse digital content. Their standard form restrictions on reuse are remarkably similar.²²²

To the extent that a particular work is unique in an economic sense (as opposed to merely "original"), or that demand for a particular type of work is independent of price and other terms, it will be the publisher who has the power to dictate the terms of use. Here, the analysis offered by Merges and O'Rourke illustrates the conceptual limits of the neoclassical model. They appear to regard works as fungible commodities and do not address substitutability or elasticity issues. They do recognize the concept of market power in the antitrust sense, and even extend that concept to encompass oligopoly that results in substantial uniformity of the terms of access to digital content.²²³ Consistent with the received neoclassical tradition, however, they seem to regard either form of market power as the extraordinary case.²²⁴ This is puzzling; economists have recognized for nearly one hundred years that where technology creates significant economies of scale, markets tend toward dominance by a few large players.²²⁵ In recent years,

²²¹ In the mid-1980s, Borland used this strategy to great advantage and discovered that consumers were willing to pay a higher price for unprotected software. See Paul B. Carroll, *On Your Honor: Software Firms Remove Copy-Protection Devices*, *Wall St. J.*, Sept. 25, 1986, at 86; Philip Elmer-DeWitt, *A Victory for the Pirates? Software Firms Abandon Their Key Defense Against Illegal Copying*, *Time*, Oct. 20, 1986, at 86.

²²² See General Terms and Conditions for use of the Lexis-Nexis Services (visited Sept. 25, 1998) <<http://www.lexis-nexis.com/lnc/about/terms.html>>; West Group Notice of Copyright and Trademarks (visited Oct. 19, 1998) <<http://www.westgroup.com/westhome/copyright.htm>>; Contract Between West and University of Pittsburgh School of Law (on file with author). The prohibition on reverse engineering found in most mass-market software "licenses" also is remarkably uniform. See, e.g., O'Rourke, *Drawing the Boundary*, *supra* note 5, at 490-500. Uniformity does not necessarily indicate economic optimality, moreover. A recent theoretical literature exploring standardization in corporate contracting practices demonstrates that such standardization can occur for a variety of reasons unrelated to efficiency, including learning and network externalities and strategic behavior. See, e.g., Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (Or "The Economics of Boilerplate")*, 83 *Va. L. Rev.* 713, 715-16 (1997); Jody S. Kraus, *Legal Design and the Evolution of Commercial Norms*, 26 *J. Legal Stud.* 377 (1997). The implications of this literature for "boilerplate" in the consumer mass market remain to be explored.

²²³ See Merges, *The End of Friction?*, *supra* note 5, at 126; Merges, *supra* note 61, at 1611-13; O'Rourke, *Copyright Preemption*, *supra* note 5, at 82; O'Rourke, *Drawing the Boundary*, *supra* note 5, at 541-55.

²²⁴ See Merges, *The End of Friction?*, *supra* note 5, at 126.

²²⁵ See, e.g., Galbraith, *supra* note 205, at 131-35, 140-41; Naomi R. Lamoreaux, *The Great Merger Movement in American Business, 1895-1904* (1985); Papandreou, *supra* note 132, at 14-15 (discussing Alfred Marshall, *Principles of Economics* (1920)); Polanyi, *supra* note 189; Samuels, *Further Limits*, *supra* note 36, at 432-33; Solo, *supra* note 36, at 46-47 ("The theory of monopolistic competition is tucked away in every text, but its relevance and its implications are ignored."). In the market for computer software, network effects centered around proprietary standards intensify this phenomenon. See Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 *Conn. L. Rev.* 1041 (1996); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 *Cal. L. Rev.* 479 (1998).

many of the major copyright industries have undergone enormous consolidation.²²⁶ If "market success" is defined as a perfectly competitive, atomistic market comprised of independent transactions in fungible commodities, it may be that (at least for information markets) market failure is the rule, not the exception.

The neoclassically-grounded understandings of market power and consumer sovereignty also overlook the fact that power imbalances may arise in markets for reasons other than market share. In particular, it is worth considering more carefully two oft-cited examples of consumers' power to affect product offerings in high technology markets. In the mid-1980s, consumers' vehement unhappiness with software copy-protection devices--and their persistent and creative efforts to defeat them--drove software manufacturers to abandon the devices.²²⁷ More recently, the failure (or lack of success) of several widely-publicized fee-based Internet publishing ventures has led some commentators to argue that consumers will reject pay-per-use schemes for access to digital content.²²⁸ Placed in context, however, these two examples should lead us to question whether the scope of consumer power may be more limited than has been acknowledged²²⁹ Both episodes may represent little more than skirmishes in a larger contest

²²⁶ See Ben H. Bagdikian, *The Media Monopoly* (5th ed. 1997); C. Edwin Baker, *Advertising and a Democratic Press* (1994); Benjamin R. Barber, *Jihad vs. McWorld* 137-48 (1995); Noam Chomsky & Edward Herman, *Manufacturing Consent: The Political Economy of the Mass Media* 3-14 (1988).

²²⁷ See Carroll, *supra* note 221; Elmer-DeWitt, *supra* note 221; T.R. Reid, *Consumers Win as More Software Firms End Copy Protection*, *Wash. Post*, Nov. 10, 1986, (*Wash. Bus.*), at 13 [hereinafter Reid, *Consumers Win*]; T.R. Reid, *Let Freedom--From Copy Protection Gimmicks--Ring*, *Wash. Post*, Apr. 28, 1986, (*Wash. Bus.*), at 25 [hereinafter Reid, *Freedom*]; *Lotus Plans to Cut Anti-Copying Device From 1-2-3 Program*, *Wall St. J.*, Sept. 16, 1987, § 2, at 38.

²²⁸ See, e.g., Iver Peterson, *Wall Street Journal on Line: Readers Pay but Profits Remain Elusive*, *N.Y. Times*, Feb. 10, 1997, at D8 (describing failure of Microsoft's on-line magazine, *Slate*, to generate paying subscribers and uncertain future of *Wall Street Journal's* Interactive Edition); Jared Sandburg, *Web Magazines' New Battle Cry: Charge!*, *Wall St. J.*, Feb. 26, 1998, at B1; E-mail from Timothy C. May to Recipients of List CO-E-CONF (Nov. 7, 1996) (on file with author) (proceedings of 25-person online focus group convened by the United States Copyright Office, as part of its "Project Looking Forward," to discuss the future development of Internet technology and its implications for copyright); *infra* note 229. But see *infra* note 243 (observing that both of these ventures appear to be succeeding at their second attempts to charge subscribers). information in society generally, there is no reason not to allow such restrictions. That theory, of course, presumes a perfectly functioning neoclassical market of the sort that does not exist. See *supra* section II.A.

Pamela Samuelson, on the other hand, has used the example of copy-protection in the 1980s to argue that consumers will take matters into their own hands and develop ways of defeating unpopular copy-protection schemes--as long as the government does not make it illegal to do so. See Samuelson, *supra*, at 59-60. Allowing consumers to exercise this power would, of course, be inconsistent with the cybereconomists' proposed private-law regime. For further discussion of this issue, see *infra* text accompanying notes 263-66 and 274-76.

²²⁹ Interestingly, these examples have been cited by commentators on all sides of the digital CMS question. Opponents of the private-law approach to digital copyright use them to argue that consumers will (and should) reject restrictions on their traditional fair use rights. See, e.g., Pamela Samuelson, *Will the Copyright Office Be Obsolete in the Twenty-First Century?*, 13 *Cardozo Arts & Ent. L.J.* 55, 59-60 (1994). They join a cadre of self-proclaimed "digerati" who assert that information cannot be fenced, and that in order to succeed as business ventures, purveyors of information must attempt to differentiate themselves on quality of service issues. See, e.g., John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age*, *Wired*, Mar. 1994, at 84; Stewart Brand, *Finding A Balance in the Slippery Economics of an Information Age: Depending on Your Perspective*, *Data's Free--or Priceless*, *L.A. Times*, Nov. 8,

that content providers appear to be winning--aided in no small part by the legal and market institution of the standard form contract, which ensures that consumers and producers do not start out on the level playing field posited by neoclassical theory.

The consumer rebellion against software copy-protection devices was both more and less than the populist revolt that it has come to symbolize. Although many consumers objected to copy-protection on principle, others balked at the inconvenience and sheer frustration the devices entailed. This latter group included large numbers of corporate and governmental consumers of software products. Early copy-protection devices prevented users from creating back-up copies of the floppy disks containing the original copies of the software and, often, from loading purchased programs onto hard-disk storage for more efficient use.²³⁰ In addition, some devices caused system crashes and peripheral device failures.²³¹ These problems spelled disaster for organizational users that relied on the copy-protected software to run their operations.²³² Media coverage of the copy-protection debacle suggests that it was these consumers whose protests mattered most to software companies. Deciding factors in many software companies' decisions to abandon copy-protection were "the objections of the big corporations--the kinds of places that tend to have a few hundred IBM PCs spread around the company," and the Department of Defense's ban on the purchase of copy-protected programs for its own internal use.²³³

After the software industry had conceded defeat, however, the Software Publishers' Association undertook an aggressive campaign designed to convince its members' corporate customers of their visibility and vulnerability to copyright infringement lawsuits, and made known that it "would welcome a case to prosecute."²³⁴ Meanwhile, software firms began to redesign the offending devices. More recent efforts

1987; Esther Dyson, *Intellectual Value*, *Wired*, July 1995, at 136.

If this latter group of critics is right, of course, digital CMS do not seem to have much of a future, and the potential threat to user privileges traditionally afforded by the public law of copyright need not concern us greatly. The cybereconomists do not make (or, for that matter, address) that argument, but simply maintain or assume that consumers will exercise their power to reject particular terms and conditions that they find unpalatable. See, e.g., Bell, *supra* note 5, at 601-08; O'Rourke, *Copyright Preemption*, *supra* note 5, at 81-89. In fact, however, the positions staked out by thinkers like Dyson and Barlow, on the one hand, and copyright owners and the cybereconomists, on the other, are not as different as they seem. Perhaps because of their belief that "information wants to be free," Dyson and Barlow seem comfortable with the idea that purveyors of digital information should enjoy broad contractual authority. See Barlow, *supra*; Brand, *supra*; Dyson, *supra*. The theory seems to be that if contractual restrictions on the use of information acquired from any particular vendor cannot impede the flow of

²³⁰ See, e.g., Carroll, *supra* note 221; Reid, *Consumers Win*, *supra* note 227; Reid, *Freedom*, *supra* note 227.

See, e.g., Tim Frost, *Tales From the Encryption Wars: CD-Secure2 Software; CD-Cops Disc Analysis Software; DiscGuard Encryption Device; CopyLok Encryption Device*, One to One, Dec. 1, 1997.

²³¹ See, e.g., Tim Frost, *Tales From the Encryption Wars: CD-Secure2 Software; CD-Cops Disc Analysis Software; DiscGuard Encryption Device; CopyLok Encryption Device*, One to One, Dec. 1, 1997.

²³² See, e.g., Carroll, *supra* note 221 (quoting complaints of personal computing manager at Coopers & Lybrand).

²³³ See Reid, *Consumers Win*, *supra* note 227; Elmer-DeWitt, *supra* note 221. In Hirschman's terms, these large corporate customers chose to combine "voice" with credible threats of exit. See Hirschman, *supra* note 215, at 30- 43. A key factor in that decision may have been their sizable investments in software and employee training. See *id.* at 92-98 (predicting that high costs of entry may create a "loyalty" effect, which will incline customers to try voice first in order to preserve their initial investment). Because of their size, these customers' threats posed a serious financial risk to software vendors.

²³⁴ Peter Coffee, *Fear of Prosecution Prompts Comeback of Hardware Keys*, *PC Week*, Apr. 3, 1989, at 13.

eliminate many of the undesirable side-effects of the first-generation devices--for example, by using more durable CD-ROM media to distribute software products, and encryption coupled with "licensed" authorized-user access codes, rather than malfunction-prone jamming devices, to protect against copying.²³⁵ Although there is still considerable resistance to the idea of copy-protection among some consumer communities, there is some evidence that these hybrid technological and contractual copy-protection regimes are beginning to achieve market penetration among corporate customers.²³⁶

Experiments with copy-protection devices for other types of mass-marketed works have yielded varying results. Thus far, consumers have refused to buy digital audio tape machines and media outfitted with serial copy management technology that prevents second-generation copying.²³⁷ However, both machines and recording media cost substantially more than their analog counterparts, and high-fidelity digital sound recordings are already available on compact disc. Meanwhile, anti-copying devices are routinely incorporated into videocassettes sold for commercial rental.²³⁸ Although anti-copying devices exist, there is no evidence suggesting that substantial numbers of ordinary consumers use them.²³⁹

The track record of pay-per-use models for digital publishing is better. Arguments that all such models are destined to fail ignore the unequivocal success of online pay-per-use services aimed at particular market segments--for example, legal and business databases such as LEXIS/NEXIS, Westlaw, and Dialog.²⁴⁰ Experiments with different bundling and fee structures for Internet delivery of specialized content to various technical and academic markets are now underway.²⁴¹ Library organizations are working to develop

²³⁵ See Frost, *supra* note 231.

²³⁶ See *id.*; Philip E. Ross, Cops Versus Robbers in Cyberspace, *Forbes*, Sept. 9, 1996, at 134; A License You'd Like to Lose, *PC Mag.*, Apr. 22, 1997, at 29; see also Coffee, *supra* note 234. It is worth noting that the SPA and another industry association, the Business Software Alliance, have continued to maintain an aggressive enforcement stance. See Susan Athey & John Plotnicki, Would the Software Police Find Your Company Guilty?, 45 *J. Sys. Mgt.*, Oct. 1994, at 32; Kelly R. Bowers, Piracy and Penance: How In-House Counsel Deal With Software Piracy and Make Infringers Pay, 7 *Corp. Leg. Times*, May 1997, at 1; Software Publishers' Assoc., Directory of Piracy/Releases (visited Oct. 11, 1998) <<http://www.spa.org/piracy/releases>>.

²³⁷ See Ken C. Pohlmann, Swashbuckled (digital video disc piracy), *Video Mag.*, Dec. 1, 1996. Despite the opposition of the home recording industry, music producers successfully lobbied Congress to pass an amendment to the Copyright Act requiring the installation of serial copy management technology on all digital audio recording equipment and media. See Audio Home Recording Act of 1992, 17 U.S.C. §§ 1001-1101 (1994).

²³⁸ See Nicholas E. Sciorra, Self-Help & Contributory Infringement: The Law and Legal Thought Behind a Little 'Black-Box,' 11 *Cardozo Arts & Ent. L.J.* 905, 925-26 (1993).

²³⁹ See *id.* at 928-29.

²⁴⁰ See E-Mail from Brian Kahin, Director, Information Infrastructure Project, John F. Kennedy School of Government, to Recipients of List CO-E-CONF (Nov. 10, 1996) (proceedings of 25-person online focus group convened by the United States Copyright Office, as part of its "Project Looking Forward," to discuss the future development of Internet technology and its implications for copyright) (on file with author) ("Metered-use charging on the Web will come into its own for high-value information and certain forms of niche marketing...."); E-Mail from Timothy C. May to Recipients of List CO-E-CONF (Nov. 10, 1996) (on file with author).

²⁴¹ See Jeffrey K. MacKie-Mason & Juan F. Riveros, Economics and Electronic Access to Scholarly Information, in *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property* (Deborah Hurley et al. eds.,

policies for licensing and making available to patrons digital content provided on a pay-per-use basis, and thousands of for-profit libraries of digital information already exist.²⁴² This suggests that the question is not whether rights management technologies will be adopted, but the precise forms they will take in new market segments. Self-evidently, consumers will not pay for information that is readily available elsewhere at no charge, but the World Wide Web is still in its infancy as a commercial medium, and the search for business models that might enable Internet publishers to capture some of the consumer surplus they generate is just beginning.²⁴³

What are we to make of these stories? (And why not simply conclude, along with the cybereconomists, that consumers are becoming accustomed to, and maybe even starting to like, rights management technologies and contractual pay-per-use regimes?) Consumer sovereignty is, as Bowles and Gintis note, "a peculiarly toothless kind of sovereignty."²⁴⁴ It is structural only; individual consumers generally cannot initiate directed changes in the pattern of supply.²⁴⁵ It is also largely reactive; "individuals are free not to enter some transactions" but, unless they happen to be IBM or the Department of Defense, generally are not free to require that specific products, services, or features be offered.²⁴⁶ To capitalize on the structural power of aggregate demand in a conscious fashion, ordinary consumers must overcome significant collective action and information costs.²⁴⁷ The same technologies that contribute to the absence of "friction" may mitigate these problems--by, for example, reducing the communications costs that attach to organized

forthcoming 1998); John Chung-I Chuang & Marvin A. Sirbu, *The Bundling and Unbundling of Information Goods: Economic Incentives for the Network Delivery of Academic Journal Articles*, (visited Oct. 11, 1998) <<http://www.ini.cmu.edu/~sirbu/pubs.html>>; see also Hal R. Varian, *Pricing Information Goods*, (visited Oct. 11, 1998) <<http://www.sims.berkeley.edu/~hal/people/hal/papers.htm>>; Hal R. Varian, *Versioning Information Goods*, (last modified Mar. 13, 1997) <<http://www.sims.berkeley.edu/~hal/people/hal/papers.htm>> (discussing theoretical issues involved in designing a pay-per-use regime).

²⁴² See Hal R. Varian, *The Information Economy: How Much Will Two Bits Be Worth in the Digital Marketplace?*, *Sci. Am.*, Sept. 1995, at 200, 201; Mary M. Case, *Library Associations Endorse Principles for Licensing Electronic Resources* (last modified July 15, 1997) <<http://www.arl.org/newsltr/194/licensing.html>>.

²⁴³ See Robin Pogrebin, *For \$19.95, Slate Sees Who Its Friends Are*, *N.Y. Times*, Mar. 30, 1998, at D1 (reporting that Slate's second attempt to charge for subscriptions generated 17,000 paying subscribers in less than a month); Sandburg, *supra* note 228 (noting that two years after the start of the *Wall Street Journal's* experiment, paid subscribers to *Interactive Edition* have tripled and the service is expected to turn a profit in 1999). Moreover, the failure rate for fee-paid online ventures must be assessed relative to the failure rate for print media ventures aimed at the consumer mass market.

²⁴⁴ Bowles & Gintis, *supra* note 208, at 174.

²⁴⁵ See Samuel Bowles & Herbert Gintis, *The Political Economy of Contested Exchange*, in *Rethinking Power* 196, 221 (Thomas E. Wartenburg ed., 1992).

²⁴⁶ See Bromley, *supra* note 36, at 65-66 ("I am free to buy any of the nine brands of toothpaste that happen to be on the shelf, or to buy none at all. But if I happen to like a different brand of toothpaste--one that cannot obtain scarce shelf space because of any number of reasons--then I am not free to buy that brand of toothpaste."). O'Rourke might respond that IBM and the Department of Defense, as rational consumers, will act in ways that serve the interests of consumers generally. See O'Rourke, *Copyright Preemption*, *supra* note 5, at 81-87. As the example of software copy protection shows, this is only true to the extent that large/organizational consumers and small/individual consumers share the same concerns.

²⁴⁷ See Bromley, *supra* note 36, at 65-66; see generally Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* 33-36, 43-52, 124-31 (4th ed., 1971).

protest activity--but they cannot eliminate them.²⁴⁸ Moreover, as the example of software copy-protection technologies demonstrates, the obstacles to sustained collective action multiply when the category "consumers" includes multiple constituencies with different priorities.

Mobilizing consumer protest would be difficult enough if markets for particular products tended to exist in the equilibrium states posited by neoclassical theory. Capitalist markets, however, are dynamic. In order to produce profits over the longer term, firms must innovate and adapt to changing marketplace conditions.²⁴⁹ The history of software copy-protection suggests that if consumers dislike a product feature that is considered important to an industry's long-term success, or to increased profits, firms are unlikely to give up without a fight. They may seek to alter the feature to please important customers, but they also will try to reeducate consumers as to its desirability.²⁵⁰ In addition, because the major copyright industries have far fewer producers than consumers, it has been comparatively easy for producer firms to engage in collective action of their own to promote their shared interests. Thus, for example, just as the Software Publishers' Association has persuaded--or, depending on one's point of view, coerced--some consumers to reevaluate software copy-protection, the Association of American Publishers has taken a leadership role in developing and preaching the virtues of digital CMS.²⁵¹ Consumer organizations have grown more skilled at sensing and responding to industry initiatives, but are comparatively underfunded and understaffed.²⁵²

²⁴⁸ See Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 Conn. L. Rev. 981, 1000-01 & n.76 (1996) (noting that "effective lobbying for legal change requires ... sustained investment of effort and resources, and some real-world infrastructure to coordinate that effort"); Olson, *supra* note 247, at 47 (defining communications costs to include costs required "to obtain an agreement about how the burden will be shared and to coordinate the effort to obtain the collective good").

Digital networks also make it easier for disgruntled consumers to exercise "voice," see Hirschman, *supra* note 215, because it is easier to publicize protests and boycotts widely. See, e.g., David White, *Telefonica to Cut Rates After Protest*, *Fin. Times*, Sept. 16, 1998, at 24 (describing successful consumer-organized protest against telephone rate hike in Spain); Leslie Miller, *Dion Concert Drawing Protests: Firm Sponsoring Singer's Tour Said to Trade with Burma Regime*, *The Patriot Ledger* (Quincy, Mass.), Aug. 21, 1998, at 5 (describing use of Internet to organize a boycott of Swedish telecommunications company Ericsson's consumer products). Hirschman's analysis suggests, however, that even so, only consumers who feel they have expended significant entry costs will do so. See Hirschman, *supra* note 215, at 41-42. For most works, particularly given the low prices the cybereconomists predict, this perception is unlikely. In addition, consumers who would be inclined to protest must still overcome the other institutional constraints described in this Part.

²⁴⁹ See Bowles & Edwards, *supra* note 205; Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* 79-80, 82-91 (3d ed. 1950).

²⁵⁰ Cf. Goldberg, *supra* note 79, at 482-83 ("[T]he flow of information can be manipulated to influence outcomes.... The obvious implication of this is that a group should allocate resources toward the manipulation of information to induce favorable results.").

²⁵¹ See Hearing on H.R. 2281 and 2280, *supra* note 33, at 204-12 (statement of Allan R. Adler, Vice-President for Legal and Governmental Affairs, Association of American Publishers); Hearing on H.R. 2441, *supra* note 33, at 180-203 (statement of Richard Robinson, Chairman, President, and CEO, Scholastic, Inc., on behalf of the Association of American Publishers); Burns, *supra* note 5, at 59-62; Gervais, *From Rights Trading to Electronic Publishing*, *supra* note 24. For a list of the other industry associations that have advocated the necessity of digital CMS, see *supra* note 33.

²⁵² In 1995, the annual incomes of the Association of American Publishers and the Motion Picture Association of America, two of the largest copyright industry organizations, were \$7.4 million and \$29.3 million, respectively. In contrast, the

This structural producer-consumer imbalance is amplified by real-world legal and market institutions that discourage consumer agency. As discussed in section II.A, the legal rules governing standard form contracts presume consent to most terms in most cases, even as they reduce the likelihood that consumers will know and understand the terms to which they supposedly have agreed.²⁵³ As Victor Goldberg explains, this regime is not neutral. A societal choice to delegate most commercial rulemaking to private actors in markets gives the edge to those groups that organize most efficiently in markets-- namely, private firms.²⁵⁴ Under such a regime, moreover, "the firm's power does not depend on its being large within a particular market."²⁵⁵ In the non-digital world, the coercive nature of the standard form is mitigated by the fact that many consumers simply ignore the restrictions.²⁵⁶ Digital rights management technologies eliminate that option for most ordinary consumers. Consumers in aggregate may have (potential) power, but the individual consumer has the "choice" of submitting to the commands of the standard-form-as-code or doing without the desired work.²⁵⁷ It is not particularly surprising that, although consumers have been able to convince manufacturers to rethink specific experiments with rights management technologies, they do not seem to have succeeded in using market mechanisms to displace a research, development, and public relations trajectory dedicated to implementing these techno-contractual regimes in the long run.²⁵⁸

annual incomes of various Digital Future Coalition member organizations were: Electronic Frontier Foundation, \$1.1 million; Electronic Privacy Information Center (1997 data), \$200,000; Home Recording Rights Coalition, \$94,000. See Encyclopedia of Associations (1998); National Directory of Nonprofit Organizations (1995).

²⁵³ See supra text accompanying notes 72-79.

²⁵⁴ See Goldberg, supra note 79, at 474-79, 484-88; see also Samuels, Further Limits, supra note 36, at 438-39; supra note 79; cf. Oliver E. Williamson, The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting 85-130 (1985) (describing the efficiency gains derivable from hierarchical organization within markets).

²⁵⁵ Goldberg, supra note 79, at 479.

²⁵⁶ Cf. Goldberg, supra note 79, at 485 n.53 ("The oppressiveness of the standardized terms is somewhat attenuated by the fact that the firms often do not enforce them."). In addition, many courts have held "shrinkwrap" license provisions unenforceable. See supra note 70. On content providers' strategy for responding to this judicial intransigence, see infra section III.A.2.

²⁵⁷ Cf. Lawrence Lessig, The Law of the Horse: What the Law of Cyberspace Might Teach, Stan. Tech. L. Rev., P 88 (draft 1997) <http://stlr.stanford.edu/STLR/Working_Papers/97_Lessig_1/article.htm> ("[I]n fact, these code constraints are not 'contracts.' Sure, they are 'like' contracts: they are both self-imposed constraints. But 'like' is not 'is.'").

²⁵⁸ See Goldberg, supra note 79, at 484-91; Samuels, Further Limits, supra note 36, at 422 ("Power structure is a partial input and a partial output of the market."). Consumer advocacy groups have achieved more success on the legislative front. See infra text accompanying notes 282-85.

Two consumer-driven developments that bear further watching, however, are Linux--a computer operating system developed by a Finnish university student who was dissatisfied with the products then available on the market--and the GNU project--a project to develop, share, and collaboratively improve non-proprietary, "open-source" computer software. See Josh McHugh, For the Love of Hacking, Forbes, Aug. 10, 1998, at 94. Both software systems trace their origins--and their growing popularity--to a dissatisfaction with proprietary models for software development that emphasize intellectual property rights and discourage knowledge-sharing. See id.; Ira V. Heffan, Note, Copyleft: Licensing Collaborative Works in the Digital Age, 49 Stan. L. Rev. 1487 (1997). GNU products, for example, are distributed under a "General Public License" that requires users to forgo proprietary rights in their own modifications to the software and dedicate those modifications to the public domain. See Heffan, supra.

For most ordinary consumers, Linux and the GNU products are esoterica. They require a certain amount of effort and knowledge to obtain and install; proprietary systems such as Microsoft Windows, meanwhile, come pre-loaded onto personal computers. See Nicholas Petreley, Down to the Wire: This Happy Linux Camper Is Crying a River Over All the Political Infighting, InfoWorld, Aug. 24, 1998. Since its inception in 1993, however, Linux has earned extremely high ratings for quality

Indeed, it would seem entirely reasonable to hypothesize that once copyright owners have developed reliable technologies and reached sufficiently broad consensus on the level of control to be implemented, consumers may have difficulty using their "power to switch" to obtain substantial or qualitative change--even if many consumers dislike rights management technologies and fractional usage rights and believe that they would derive increased utility from decreased author/owner control.²⁵⁹

Viewed in light of the doubly constrained nature of consumer sovereignty, Merges's work is both a promising first step toward a model of exchange in information markets and an excellent example of the dimensional limitations of neoclassically-grounded market models. Merges's institutional focus underscores the significance of endogenous enforcement mechanisms in determining market structure.²⁶⁰ However, he stops short of exploring the ramifications for power, and appears to presume that market forces will produce an equilibrium of sorts among collective institutions.²⁶¹ If every potential reader of a digital work is also a creator and a member of one of the competing collective enforcement organizations, this model might be appropriate.²⁶² In practice, however, this is hardly likely to be the case. Many (if not most) readers will participate in the dynamic process of endogenous enforcement only in their reactive capacity, as consumers rather than as coequal architects of long-term rights management strategies. In addition, Merges takes the existing legal and market institution of the standard form as given, and as a result overlooks the power imbalance that this institution fosters.

One might object, however, that characterizing consumers as purely reactive overstates the case. The history of software copy-protection also teaches us that some consumers will develop and market devices designed to defeat rights management technologies.²⁶³ Elsewhere, I have argued that the law should not

and has achieved an installed base of approximately 5 to 10 million users. See McHugh, *supra*, at 96; Robert F. Young, *Sizing the Linux Market* (last revised Mar. 5, 1998) <<http://www.redhat.com/redhat/linuxmarket.html>>. While this number is small compared with the estimated 100 million users of Microsoft Windows 95, it has doubled every year. Compare Young, *supra*, at 6 with Microsoft Corporation, *Windows Momentum* (visited Nov. 4, 1998) <http://www.microsoft.com/hwdev/presents/respec/melt98/1_7jima/sld003.htm>. Unlike the vast majority of Windows users, moreover, Linux and GNU users are fiercely loyal to the software and the principles for which it stands. See McHugh, *supra*. Whether Linux and GNU can become significant competition for Windows in the consumer mass market, and in the OEM licensing market that serves the consumer mass market, will be an important test of information consumers' power to demand and receive different information products and different approaches to intellectual property protection.

²⁵⁹ Of course, if utility is synonymous with wealth, as adherents of neoclassically-grounded law and economics conveniently assume, this simply would mean that consumers do not value decreased control as much as copyright owners value increased control, and that the market has reached the efficient equilibrium point. Making wealth the measure of utility, however, grossly oversimplifies utilitarian theory and ignores substantial empirical and theoretical literatures demonstrating that utility cannot be and is not assessed solely in monetary terms. See *supra* text accompanying notes 132, 160.

²⁶⁰ See Merges, *Contracting Into Liability Rules*, *supra* note 5.

²⁶¹ See *id.* at 1319.

²⁶² A similar theory appears to underlie Xanadu, the collective remuneration system proposed by Internet pioneer Ted Nelson. See Pamela Samuelson & Robert J. Glushko, *Intellectual Property Rights for Digital Library and Hypertext Publishing Systems*, 6 *Harv. J.L. & Tech.* 237 (1993).

²⁶³ See, e.g., Brand, *supra* note 229; Alison Cunliffe, *Toronto Firm Sells Tools for Unlocking Copy-Proof Program*, *Sunday Star Toronto*, July 27, 1986, at F5; Elmer-DeWitt, *supra* note 221; Samuelson, *supra* note 229, at 59-60.

prohibit consumers from circumventing digital CMS to defend privileges traditionally afforded under the public law of copyright, and that federal copyright law and policy instead should be interpreted affirmatively to authorize such conduct.²⁶⁴ Considered within the "contested exchange" framework, such technological countermeasures are simply consumers' way of attempting to restore "bilateral power" to the contest.²⁶⁵

This, however, does not seem to be the sort of market competition the cybereconomists contemplate, and here the existing institutional framework of the standard form contract becomes vitally important. Under a private-law regime of rights in digital works, designed as a technological analogue of the standard form contract to which consumers have grown accustomed (or inured) in other contexts, use of consumer-developed technologies to circumvent digital CMS would constitute a breach of contract.²⁶⁶ Under such a regime, consumers' power to contest the terms of exchanges in digital works in the market arena would be substantially curtailed.

This line of reasoning, however, suggests a more general objection to modeling transactions in digital works as "contested exchanges," which arises within the model itself. Bowles and Gintis suggest that "superior" enforcement strategies may develop that would eliminate short-side power and enable markets to clear.²⁶⁷ Arguably, even if publishers currently have greater bargaining power than consumers, digital rights management technologies will eliminate or mitigate this power. As envisioned by copyright owners and their supporters in the academy, digital CMS and the private law of contract will replace the uncertain terrain delineated by fair use and other statutory exemptions with a menu of neatly defined, individually priced usage rights from which consumers may choose.²⁶⁸ There will be, quite simply, nothing left to contest. This description, however, conveniently overlooks the fact that, from the user's perspective, the central issue in the contest over usage rights is one of institutional design--whether copyright owners should be allowed to adopt such technologies of control, and the contract-based regime that they effectuate, at all. From this perspective, the evolving publisher-consumer struggle over copy-protection and pay-per-use technologies has been one long contested exchange concerning institutional choice, the outcome of which is still uncertain.

Bowles and Gintis also observe that the more powerful party to a contested exchange will attempt to

²⁶⁴ See Cohen, *supra* note 49, at 1137-42; Cohen, *supra* note 9, at 178; Lawrence Lessig, *Tyranny in the Infrastructure*, *Wired*, July 1997, at 96 (labeling this argument the "Cohen theorem"); *supra* note 214 (discussing self-help as the endogenous enforcement strategy of choice for consumers); cf. Cohen, *supra* note 248, at 1019-30 (arguing that first amendment should protect individuals who tamper with digital CMS in order to preserve their anonymity).

²⁶⁵ See Bowles & Gintis, *supra* note 208, at 184; *supra* text accompanying note 210.

²⁶⁶ See Hardy, *supra* note 5, at 235-36; cf. I. Trotter Hardy, *The Ancient Doctrine of Trespass to Web Sites*, 1996 *J. Online L.* art. 7, PP 5-6 (1996) <<http://www.wm.edu/law/publications/jol/hardy/html>> (suggesting that undesired entry upon digital "property" could be viewed, by analogy to real property, as trespass). For three years copyright owners have been seeking legislation at the state level designed to accomplish precisely this result, along with federal legislation that would make circumventing digital CMS illegal. See Hearing on H.R. 2281 and 2280, *supra* note 33. See U.C.C. art. 2B: Licenses (Annual Meeting Draft July 1998), *supra* note 24, §§ 2B-208, -310, -714, -715; sources cited *supra* note 33. Thus, copyright owners themselves do not seem to be relying purely on markets to achieve their desired goals. This observation and its implications for the cybereconomists' argument about the appropriate forum for social choice are discussed *infra* section III.A.2.

²⁶⁷ See Bowles & Gintis, *supra* note 208, at 184; *supra* note 213.

²⁶⁸ See *supra* text accompanying notes 24-32.

select production technologies that maximize its ability to enforce its desired standards, even though those technologies might not be the optimal ones by some other measure. Thus, for example, in certain sectors of the labor market, the assembly line establishes quantitative, automatically-enforced standards for work performance; in others, the technology of choice is the computer that measures words typed or grocery items scanned per minute.²⁶⁹ Closer to the institutionalist mainstream, Goldberg observes that it is simply rational for parties to seek additional profits by altering existing institutions to their advantage.²⁷⁰ The digital rights management movement exemplifies this type of rational self-interest, but that does not make it the best solution for society generally. The fact that a technology may enable market formation is not the sole criterion of merit; technologies also shape markets and entitlements by creating some options and foreclosing others.²⁷¹ We are back to the same question that Hardy's property-rights proposal raises, posed in a slightly different form: Do digital CMS enable development of the socially optimal market structure--i.e., the one that optimizes overall or social welfare? The answer, once again, depends on the social-welfare function that we are seeking to optimize. Before turning to that question, however, it is worth briefly considering how the process of collective choice through legislation affects, and is affected by, the dynamic of contested exchange in the market for digital works.

2. Collective Action, "Rent-Seeking," and Public Choice

The cybereconomists contend that the public-law regime of copyright and the legislative process that produced it are inefficient and inherently coercive, and that rights in digital works should be determined through voluntary, definitionally private, market transactions.²⁷² I have argued, however, that private ordering necessarily presupposes a prior public commitment to recognizing and enforcing a particular distribution of entitlements. Attempts to seek legislative change or clarification may, and often do, reflect attempts by economic interest groups to capture the public process, but it does not follow that the existing regime is entitled to any special presumption of legitimacy. An existing regime also may reflect the results of earlier interest-group capture. Against the backdrop of contested exchange, it is only reasonable to expect interest groups to use all available venues to advance their interests.²⁷³ When legislative change

²⁶⁹ See Bowles & Gintis, *supra* note 208, at 186-87.

²⁷⁰ See Goldberg, *supra* note 79, at 471-72 ("There is a kernel of truth in the notion that institutions will adjust to changes in technology However, it is also clear that these will not be the only institutional changes that take place. The group's incentives are not to maximize the size of the pie for society; the incentive instead is to maximize the rewards to the group."); *id.* at 479 ("Why would a[firm] that is actively seeking profits within the rules of the game not seek further profits by altering the rules of the game as well--especially when its structure [as an efficient collective institution] makes it likely that it will succeed?"); *id.* at 482-83 ("[T]he flow of information can be manipulated to influence outcomes.... The obvious implication of this is that a group should allocate resources toward the manipulation of information to induce favorable results."); Goldberg, *supra* note 104, at 124-28; cf. Papandreou, *supra* note 132, at 215-16, 225 (suggesting that the development of entitlements will be determined in part by the distribution of "power, coercion, and influence" in society).

²⁷¹ For further discussion of this point, see *infra* Part IV.

²⁷² See *supra* section II.A.

²⁷³ See Calabresi, *supra* note 104, at 1214 ("[I]n mixed systems like ours people will use their distributional advantage in one medium to overcome their distribution disadvantage in the other by 'altering' or 'corrupting' that other medium."); Goldberg, *supra* note 79, at 476-81; Leff, *supra* note 36, at 467-69.

is sought, the real question is whether shared conceptions of social welfare warrant reconsideration of the framework of entitlements and contract rules that supports the existing market.

Copyright owners' current efforts to strengthen their existing rights suggest that they, at least, are well aware that public and private realms cannot be so neatly separated. Consistent with their philosophy of absolute ownership and control, and with Goldberg's predictions about the causes and directions of institutional drift, organizations representing the major copyright industries have for the last three years been seeking legislation from Congress that would make technologies for circumventing digital CMS illegal regardless of their intended use.²⁷⁴ Simultaneously, at the state level, many of the same organizations are pursuing revisions to the Uniform Commercial Code that would make standard form contract terms imposed by digital CMS enforceable, even if they abrogate the balance established by copyright law, as long as consumers have the opportunity to review the terms, and are required to indicate assent, before first using the work.²⁷⁵ Proposed Article 2B of the UCC also would expressly validate technological restrictions on access to and use of digital works, including mechanisms that cut off user access to the work entirely in the event of a perceived breach.²⁷⁶ Although neither proposal addresses the ultimate question of copyright preemption, as a practical matter either set of changes would go a long way toward establishing the private-law regime that the cybereconomists propose. Indeed, it is difficult to imagine how their private-law model of rights in digital works could be implemented fully without some legislative restructuring of the current system.²⁷⁷

Public-choice analysis predicts that consumers will experience a comparative disadvantage in the legislative arena. The public-choice critique of the legislative process focuses on the power of small, well-organized interest groups to extract results more favorable than they could obtain in the market. The

²⁷⁴ See S. 2037, 105th Cong. (1998); S. 1121, 105th Cong. (1997); H.R. 2281, 105th Cong. (1997); S. 1284, 104th Cong. (1995); H.R. 2441, 104th Cong. (1998); NII White Paper, *supra* note 9, at app.; Hearing on S. 1284, *supra* note 33; Hearing on H.R. 2281 and 2280, *supra* note 33; Hearing on H.R. 2441, *supra* note 33; Creative Incentive Coalition, Resources: Key Questions Answered (visited Sept. 27, 1998), <<http://www.cic.org/resources/faq.htm.html>>; Cohen, *supra* note 9, at 164-71; Samuelson, *supra* note 9.

²⁷⁵ See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998) *supra* note 24, § 2B-208. At the NCCUSL's July 1998 annual meeting, the commissioners approved a motion directing the drafting committee to amend Article 2B to allow judges to abrogate terms that violate "public policies relating to innovation, competition, and free expression." However, the next draft of Article 2B, which was supposed to incorporate the motion, substantially alters its language, omitting any mention of "innovation" or "free expression" and referring only generally to "fundamental public policy." See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), *supra* note 24, § 2B-105(b) & notes.

²⁷⁶ See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), *supra* note 24, §§ 2B-310, 715; Cohen, *supra* note 49, at 1096-1101.

²⁷⁷ This is certainly true for Hardy's proposal, as Hardy acknowledges. See Hardy, *supra* note 5, at 257-58. He does not explain why legislation establishing a private-property regime would be less coercive than the current Copyright Act. It is conceivable that a private-law regime based solely on the use of contract to opt out of the copyright system could be implemented via judicial refusal to hold such contracts preempted. See *supra* text accompanying notes 80-88 (discussing the Copyright Act's preemption of "equivalent" state law rights). As noted above, however, courts have differed on the enforceability of "shrinkwrap" license terms as a matter of contract law. See *supra* note 70. Proposed Article 2B would effectively overrule decisions denying enforceability.

theory posits that collective action is less likely to occur when an interest group has many members and the benefits of proposed legislation would be diffuse. Under those conditions, group members are likelier to conclude that the costs of collective action outweigh the benefits, and/or to engage in opportunistic free riding on others' efforts.²⁷⁸ Consumers are a paradigmatic example of this sort of group. To an extent, predictions of consumer disempowerment are overstated; as Peter Schuck points out, consumer advocacy groups have achieved legislative successes that defied the predictions of public choice theory.²⁷⁹ Certainly, however, there is no reason to think that consumers are more likely than copyright owners to exert undue influence over the content of copyright legislation.²⁸⁰ As noted above, copyright owners have a long history of seeking, and receiving, expanded rights and other special protections from Congress.²⁸¹

Consumers' power to affect the positive content of rules governing the distribution of entitlements may be greater in the legislative arena than in the market, however. As an initial matter, we have seen that collective action also plays an important strategic role in the consumer mass market; consumer groups face the same obstacles to organization in either venue. But, as discussed above, consumer power in the marketplace flows largely from the negative "power to switch" as exercised by individuals. Consumers cannot claim the right or authority to participate in decisions about product development, or in the selection and drafting of standard form contract terms, in the same way that they can assert a right to be heard by their elected representatives.²⁸² Second, just as digital communications technologies can reduce consumers' collective action costs in markets, they also can reduce the costs of collective action directed at government. Due to a combination of these two factors, the Digital Future Coalition, a coalition of public interest and consumer groups that has made extensive use of the Internet, kept the proposed legislation banning circumvention technologies stalled in committee for over two years.²⁸³ During that time, the coalition and its members worked with sympathetic legislators to submit competing legislation and to propose

²⁷⁸ See Olson, *supra* note 247, at 33-36, 43-52, 124-31.

²⁷⁹ See Peter H. Schuck, *Against (and for) Madison: An Essay in Praise of Factions*, 15 *Yale L. & Poly. Rev.* 553, 566-67 (1997); see also *id.* at 576 (noting that group size and funding are not the only advantages that count).

²⁸⁰ The cybereconomists do not argue this expressly, but only that the legislative process is comparatively costly and therefore less efficient than the market. As in the *Lochner*-era cases, however, the clear implication is that legislation intended to protect "have-nots" is no less invasive of economic liberty--and indeed, very likely more so--than legislation intended to protect "haves." See *supra* note 115.

²⁸¹ See *supra* text accompanying note 100.

²⁸² See also Schuck, *supra* note 279, at 576-78 (cataloguing potential sources of advantage, other than group size and funding, for interest groups in the legislative arena). Representatives of consumer groups have had greater difficulty penetrating the UCC drafting process, which does not involve public officials. See U.C.C. Art. 2B: Licenses (Annual Meeting Draft July 1998), *supra* note 24 (listing members of drafting committee); *id.* at Preface: Part I (describing drafting process); Gail Hillebrand, *The Uniform Commercial Code Drafting Process: Will Articles 2, 2B and 9 Be Fair To Consumers?*, 75 *Wash. U. L.Q.* 69, 81-93 (1997). The default rules that govern consumer transactions also are one step removed from copyright concerns. It seems reasonable to suggest that with each degree of removal, the benefits of collective action become more difficult for individual consumers to value, with the result that the barriers to collective action are even harder to overcome.

²⁸³ See Angela Drolte Gregorits & Jennifer B. Lucas, *Most Information Age Legislation Stalled By Lack of Consensus*, Hill Sources Say, 66 *Pat., Copyright & Trademark J.* 2259, 2261 (1997); Cohen, *supra* note 9, at 164-71; Digital Future Coalition, *Collected Position Papers, Letters, and Press Releases* (visited Nov. 4, 1998) <<http://www.dfc.org/>>.

amendments to the opposing bills--steps that they would not have been able to take in the consumer mass market.²⁸⁴ As a result of this input, the anti-circumvention legislation ultimately enacted differs significantly from that originally proposed.²⁸⁵

Nonetheless, the fact that consumers may have slightly more power, or a different kind of power, in the legislative arena than in the market does not take us very far toward understanding whether their influence on the legislative process is "undue." Deciding how much influence is "proper" for a particular group requires reference to what Einer Elhauge has described as "normative baselines" concerning the rules of decision in social choice situations.²⁸⁶ For the cybereconomists, as for public choice theorists generally, the implicit normative baseline is that legislative outcomes should not differ from those obtainable in the (existing) market, and that the efficient outcome in either venue is that which maximizes private wealth.²⁸⁷ Thus, should consumers manage to obtain legislation that limits copyright owners' "liberty of contract" or derogates from their control of their property, the cybereconomists probably would find a prima facie case of abuse. But, as section II.B discussed, in the case of copyrighted works one cannot simply assume that private wealth and social welfare are equivalent.²⁸⁸ Once one allows for a broader conception of overall

²⁸⁴ See Digital Era Copyright Enhancement Act, H.R. 3048, 105th Cong. (1997); Digital Copyright Clarification and Technology Education Act of 1997, S. 1146, 105th Cong. (1997); Digital Future Coalition (visited Oct. 11, 1998) <<http://www.dfc.org/>>.

²⁸⁵ Different versions of the proposed legislation were passed by the Senate on May 14, 1998 and by the House on Aug. 4, 1998. See Digital Millennium Copyright Act of 1998, S. 2037, 105th Cong. (1998); WIPO Copyright Treaties Implementation Act, H.R. 2281, 105th Cong. (1997); Senate Approves Digital Copyright Act; Similar Proposal Moving Through House, 66 U.S.L.W. (BNA) 2710 (1998). The Senate version--essentially the same as the version backed by copyright owner groups--would have imposed an outright ban on circumvention of digital CMS, with a few narrow exceptions. The House version--essentially the version adopted--instead imposes a two-year moratorium on the anti-circumvention provision and requires ongoing oversight by the Librarian of Congress to determine the provision's impact on access to and fair use of digital works. Compare S. 2037, *supra*, § 103 with H.R. 2281, *supra*, § 3; see DMCA, *supra* note 114. Although the Act includes a ban on circumvention technologies that is not directly subject to the moratorium and oversight provisions, it also contains exceptions for software reverse engineering and encryption research. See DMCA, *supra* note 114, at § 103. Finally, it provides that the extra rights granted to copyright owners shall not be construed to "enlarge or diminish any rights of free speech or the press for activities using consumer electronics, telecommunications, or computing products." See *id.* The Digital Millennium Copyright Act is by no means an unqualified "victory" for consumers; for example, it does not contain the across-the-board fair use exemption to the anti-circumvention provision that consumer groups had proposed. See H.R. 3048, *supra* note 284; S. 1146, *supra* note 284. Nonetheless, the Act contains important safeguards that were not in the bill as originally proposed.

Particularly in light of this example, it is important to stress the narrowness of the argument made in the text. The claim is not that consumers have equal or even substantial bargaining power in the public arena, but only that the potential exists in that arena, as it does not in the market, for consumers to exert power in a mode that is other than purely reactive, and thus to shape policy. In that respect, consumers appear to be slightly better off. Cf. Goldberg, *supra* note 79, at 491 ("The point is that as badly as the consumer is likely to fare in the legislative arena, he is likely to be relatively better off than if he were 'free' to negotiate voluntary agreements to determine liability."). Ultimately, the distinction may not count for much; on that question, it is too soon to tell.

²⁸⁶ See Elhauge, *supra* note 102, at 49-52.

²⁸⁷ See *id.* at 53-56; cf. Hovenkamp, *supra* note 98, at 98-104 (discussing public choice theorists' presumption of inefficiency in "political markets"); *supra* text accompanying notes 112-16.

²⁸⁸ Nor, I would argue, can one do so in most other cases. See Bromley, *supra* note 36, at 175-83; Veljanovski, *supra* note 104, at 19.

social welfare than that reflected in markets, it is at least possible that nonmarket mechanisms for collective choice may bring us closer to achieving it. The legislative process operates differently than the market by design; it is intended to maximize votes, not wealth, and reflects a considered judgment that vote-maximization is often the better test of a policy's validity.²⁸⁹ Whether the legislative process or the existing market is the better arena for determining the scope of rights in digital works depends on how the societal goals of access and progress are understood.²⁹⁰ To that question we now turn.

B. Information and Social Welfare

Because the cybereconomists assume that maximizing the monetary reward to copyright owners will produce the greatest gain for society as a whole, they leave unexplored the question whether social interests and social welfare might be better served by a limited-entitlements regime that enables some uncontrolled access to and use of digital content. In fact, there is reason to doubt that the cybereconomists' market-based model captures the total social value generated by transactions in creative and informational works. Recent work in the economics of information suggests that these transactions generate shared positive externalities that must be considered when comparing the existing limited-entitlements regime with possible alternatives. Many of these benefits are experienced as public goods and likely would be underproduced under a private-law regime of rights in digital works. Thus, under such a regime, the mix of benefits and costs generated by creative and informational works would be different than it is now.

To value these alternatives accurately, we must define the applicable social welfare function. How should "access" and "progress" be understood, and why? Which combination of benefits and costs is optimal? A more comprehensive understanding of individual preferences and motivations requires that we consider both market and nonmarket answers to these questions. Creative and informational works affect individual and social self-determination in a variety of ways, many of which are not registered, much less measured, by markets. It would be reasonable and entirely legitimate to conclude that the current limited-entitlements regime, or something like it, is best-suited to promote our society's distinctive blend of market and nonmarket values.

1. Externalities in Information Markets

²⁸⁹ See Hovenkamp, *supra* note 98, at 81-89, 94-106; see also Bromley, *supra* note 36, at 224 ("[I]f markets do not perform well in a given situation, is it valid then to judge non-market processes by market performance indicators?"); Leff, *supra* note 36, at 468 ("[I]t is at least plausible that the 'weaknesses' in the political system, such as its frustration of allocational efficiency, are really complementary to, or even corrective of, 'weaknesses' in the economic system, such as its tendency to distribute power in proportion to wealth"); Stearns, *supra* note 102, at 1240-45 (showing that legislatures are better suited than markets to correct for some types of market failure); cf. Goldberg, *supra* note 79, at 481 ("The voting power of the poor might be relatively stronger than its financial power.").

²⁹⁰ Cf. Herbert Hovenkamp, *Exchange on Public Choice*, 57 U. Chi. L. Rev. 840, 842 (1990) ("It is easy to begin with the observation that policymaking is indeterminate, and conclude by finding fault with the democratic institutions or procedures that we use for making policy decisions. But often the failure is not in the institutions or procedures, but rather in our inability to produce objectively correct answers to policy questions.").

Assessment of the social value produced by a given digital intellectual property regime would be incomplete without inquiry into the externalities generated by transactions in creative and informational works. Yet the cybereconomists' market model for digital property rights leaves the topic of externalities almost entirely unexplored.²⁹¹ In part, this may be due to a curiously circular approach to analyzing externalities that has emerged within the neoclassically-grounded branch of the new institutional economics.²⁹² In his pioneering work in the study of property-based institutions, Demsetz argued that private institutions will evolve in the way that maximizes overall efficiency, and defined externality as any activity the internalization of which is precluded by transaction costs.²⁹³ As Papandreou observes, "[i]t would seem then that externality poses no efficiency problems, since taking beneficial and harmful effects into account where transaction costs are too high would lead to efficiency losses. In fact, at any given time, the economic system would seem to be tautologically efficient."²⁹⁴ Thus, one might expect new institutional scholarship in the Demsetz mold to devote scant attention to the question whether a particular externality (here, uncompensated benefits to information consumers) might require or justify a particular institutional structure (here, divided or "incomplete" entitlements) despite higher transaction costs.

Possibly, though, the cybereconomists may have failed to consider externalities relating to a pure property-and-contract approach to digital works because it is difficult to understand what externalities in information markets might look like. The externalities treated in the economics literature tend to be the kind that have perceptible effects on the physical world-- pollution, overfishing, and so on.²⁹⁵ Information, by contrast, is intangible; as a result, its effects on society and social structure are poorly understood.²⁹⁶ In addition, as James Boyle has observed, because the neoclassical market model presumes perfect information, it is particularly unsuited to analyzing transactions of which information is the object.²⁹⁷ Might there be identifiable externalities in information markets, and if so, what can they tell us about the appropriate institutional structure(s) for such markets?

These questions are complicated by the fact that the precise definition of "externality" is unclear. Leading candidates include the failure of markets to form, the Demsetz transaction-cost approach (which modifies

²⁹¹ In keeping with the metaphor of Newtonian physics, and in the spirit of efforts to move beyond it, perhaps we might characterize externalities as electro-magnetic emanations arising from (and undermining) the assertedly frictionless interactions of online commerce.

²⁹² See supra note 50.

²⁹³ See Demsetz, supra note 121, at 348.

²⁹⁴ Papandreou, supra note 132, at 198.

²⁹⁵ See, e.g., Cooter & Ulen, supra note 25, at 38-40, 139-46; Demsetz, supra note 121.

²⁹⁶ Although there is a substantial political theory literature addressing these questions, economists studying the effects of information have tended to focus more narrowly on information about the objects of transactions, rather than on information as the object of transactions. See Boyle, supra note 168, at 29, 35-41 (discussing the conundrum that the neoclassical "perfect-information" model for market transactions presents for transactions in information). But see R.H. Coase, *The Economics of the First Amendment: The Market for Goods and the Market for Ideas*, 64 *Am. Econ. Rev.* 384 (1974). For recent efforts to address the unique theoretical problems posed by an information-based economy, see DeLong & Froomkin, supra note 40; Danny T. Quah, *The Invisible Hand and the Weightless Economy*, London School of Economics, Centre for Economic Performance, Occasional Paper No. 12 (Apr. 1996) <[http:// cep.lse.ac.uk/papers/occasional/download/op0012.pdf](http://cep.lse.ac.uk/papers/occasional/download/op0012.pdf)>.

²⁹⁷ See Boyle, supra note 168, at 29, 35-41; see also DeLong & Froomkin, supra note 40.

the market-failure test), coercion (in the sense of costs or benefits imposed upon third parties in an interdependent system), and what Papandreou terms a "phenomenological approach" that focuses on specific events such as pollution or over-harvesting of a natural resource.²⁹⁸ Papandreou distills from these definitions two potentially conflicting senses of "externality": (1) a consequentialist sense, which he interprets as identifying the failure of a current system/institution to optimize an agreed-on social-welfare function; and (2) an intrinsic-characteristic sense, which he interprets as identifying only those failures to optimize that flow from the absence of an intrinsically valued institutional structure--for example, the absence of private property rights.²⁹⁹ He demonstrates that both senses are present to some degree, and in tension, in each definition.

Returning briefly to the Demsetz approach, it should be obvious that, from a societal perspective, whether entitlements should be reconfigured to internalize a particular externality depends on much more than the parties' perception of the tradeoff between the externality and the transaction costs. Concluding that private assessment of transaction costs will produce the optimal institutional structure requires at least two counterfactual assumptions. One must assume that overall or social benefits and costs are simply the sum of private monetary benefits and costs, and that private parties will not engage in rent-seeking behavior designed to alter the rules to their advantage.³⁰⁰ As the discussion in Part II and section III.A suggests, in the context of copyright each of these propositions is debatable, to say the least. That copyright owners have discovered a way to reconfigure transactions that currently generate significant uncompensated benefits in order to capture those benefits for themselves says nothing about whether the result will be efficient from a societal perspective; indeed, there is good reason to believe otherwise. Moreover, rent-seeking behavior by copyright owners is the rule rather than the exception. The cybereconomists, like Demsetz before them, escape the uncertainties that these observations introduce into the efficiency analysis by resorting (implicitly) to Papandreou's second definition of "externality," and positing the normative superiority of private property and contract rights.

The pure (non-neoclassical) institutionalist approach to externalities avoids these difficulties, but at the price of indeterminacy. Institutional theory begins by recognizing that individual choice is constrained by both the individual's resources and the menu of opportunities presented by existing legal institutions. In this sense, individual choice is always (to a degree) coerced.³⁰¹ Externalities, therefore, are the costs and benefits that a particular regime of entitlements and resource distribution imposes on individuals via the constraints it places on their choices.³⁰² Because institutional theory expressly acknowledges the

²⁹⁸ See Papandreou, *supra* note 132, at 13-68 (describing debate over correct definition and summarizing the leading approaches).

²⁹⁹ See *id.* at 169-81.

³⁰⁰ See *id.* at 200-02.

³⁰¹ See Samuels, *Welfare Economics*, *supra* note 36, at 9, 11-15; see also Bartlett, *supra* note 102, at 43-44.

³⁰² See Bartlett, *supra* note 102, at 43-44; Ezra J. Mishan, *The Effects of Externalities on Individual Choice*, 1 *Intl. Rev. L. & Econ.* 97 (1981); Samuels, *Welfare Economics*, *supra* note 36, at 52-53; cf. Victor P. Goldberg, *Production Functions, Transactions Costs and the New Institutionalism*, in *Issues in Contemporary Microeconomics* 395, 399-400 (George Feiwel ed., 1984) (defining "transactions costs" as "a shortfall from what could have been achieved if [existing] institutions worked perfectly").

contingency of costs and benefits, it is ultimately less contingent and broader in scope than the Demsetz approach; rather than taking the existing legal and market framework as given, it allows consideration of alternative entitlements structures and distributive concerns. One cannot choose between different systems of entitlements and their corresponding externalities, however, without some a priori notion of value.³⁰³ Thus, an agreed-on social welfare function--as required under either of Papandreou's two definitions--becomes central to further analysis.

Finally, Papandreou's two senses of externality raise a definitional problem of their own concerning the concept of positive externality, or uncompensated benefit. Using Papandreou's consequentialist formulation, one might define a positive externality as overperformance, or optimization to a degree that exceeds expectations, by a current system/institution. Using his intrinsic-characteristic formulation, one might say that "positive externality" refers to the presence of an intrinsically valued institutional structure even where that structure is not necessary to optimize social welfare. It is hard to see how either of these definitions differs from a conclusion that the current system/institution is performing well with respect to the agreed-on criterion of social welfare, even though the benefit in question is not the subject of a market exchange.³⁰⁴ If so, perhaps the social-welfare function requires modification to encompass nonmarket indicia of satisfactory performance. With these definitional issues in mind, I turn to the specific problem of externalities in information markets.

It has long been recognized that certain types of high-technology informational works create a species of externality characterized as "network effects." Network effects arise when consumers derive increased utility from a good as other consumers purchase the same or compatible goods.³⁰⁵ Computer operating systems are one example of such a good. As a particular operating system becomes more prevalent, software developers write more applications for that operating system, which in turn gives consumers a greater range of options.³⁰⁶ Computer applications programs and user interfaces also generate network

³⁰³ See Samuels, *Welfare Economics*, supra note 36, at 61.

³⁰⁴ One might seek to avoid this difficulty by characterizing the effect's absence under alternative institutional structures as a negative externality; however, this too merely seems a convoluted way of acknowledging the current structure's success.

³⁰⁵ See Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 *Am. Econ. Rev.* 424 (1985); Lemley & McGowan, supra note 225, at 6 (citing Katz & Shapiro, supra, and Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 *Rand J. Econ.* 70 (1985)); see also S.J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, *J. Econ. Persp.*, Spring 1994, at 133 (arguing that the concept of "network externality" should be narrowed to exclude so-called "pecuniary" externalities or indirect network effects, which merely reflect the ordinary functioning of markets).

³⁰⁶ See Katz & Shapiro, supra note 305, at 424-25; Lemley & McGowan, supra note 225, at 496-97; Mark A. Lemley & David W. O'Brien, *Encouraging Software Reuse*, 49 *Stan. L. Rev.* 255, 287 (1997); Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 *Stan. L. Rev.* 1329, 1340-45, 1357-58 (1987). It is worth noting that consumers also may experience negative network effects if "lock-in" perpetuates a particular software platform or standard even after more desirable alternatives have emerged. See Lemley & McGowan, supra note 225, at 505-06; Menell, supra, at 1342-43.

effects as they become more popular. Consumers benefit from the ability to share files and migrate them between platforms, and from decreased retraining costs as applications and interfaces become standardized among employers.³⁰⁷

Less attention has been paid to the question of whether other types of creative and informational works also generate network or other externality effects. From time to time, judges and scholars writing about fair use have referred to the "external" or societal benefits generated by a particular use of copyrighted content.³⁰⁸ However, until very recently, none has attempted to develop a more detailed economic model of these benefits.³⁰⁹ As a result, the understanding of the positive externalities generated by creative and informational works remains vague, in contrast to the seeming elegance and precision of the cybereconomists' "Newtonian" model of a frictionless trading environment.

It is possible, however, to conceive of an economic model in which the shared benefits of information are the central focus rather than a peripheral concern. Technologist Philip Agre notes the importance of

³⁰⁷ See Philip H. Dybvig & Chester S. Spatt, *Adoption Externalities as Public Goods*, 20 *J. Pub. Econ.* 231, 231-32 (1983); Lemley & McGowan, *supra* note 225, at 497; Lemley & O'Brien, *supra* note 306, at 287; Peter S. Menell, *An Analysis of the Scope of Copyright Protection for Application Programs*, 41 *Stan. L. Rev.* 1045, 1066-71 (1989).

³⁰⁸ See, e.g., *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 478 (1984) (Blackmun, J., dissenting) (observing that scholarly use of a prior work "produces external benefits from which everyone profits"); Fisher, *supra* note 26, at 1768-74; Gordon, *supra* note 28, at 1630-32; Adrienne J. Marsh, *Fair Use and New Technology: The Appropriate Standards to Apply*, 5 *Cardozo L. Rev.* 635, 672-73 (1984) ("[F]air use has often been associated with 'nonmonetizable' values for which market situations do not exist or with 'external benefits' for which compensation is difficult to realize." (footnotes omitted)); M.B.W. Sinclair, *Fair Use Old and New: The Betamax Case and its Forebears*, 33 *Buff. L. Rev.* 269, 282-83 (1984) ("Taking into account the externality of societal interest and benefit is a crucial aspect of fair use analysis--indeed, it is the cornerstone of American copyright law."); Jeremy Waldron, *From Authors to Copiers: Individual Rights and Social Values in Intellectual Property*, 68 *Chi.-Kent L. Rev.* 841, 861 (1993); Anastasia P. Winslow, *Rapping on a Revolving Door: An Economic Analysis of Parody and Campbell v. Acuff-Rose Music, Inc.*, 69 *S. Cal. L. Rev.* 767, 793 n.143 (1996) (noting that when "society reaps a benefit from which the transacting parties do not profit," private transactions "will fail to produce the optimal amount of the benefit-generating activity"); see also Glynn S. Lunney, Jr., *Lotus v. Borland: Copyright and Computer Programs*, 70 *Tul. L. Rev.* 2397, 2416-17 (suggesting that copyrightable characters in fictional works generate "substantial" network externalities).

³⁰⁹ The notable recent exceptions are Mark Lemley and Lydia Loren. See Lemley, *supra* note 6, at 1056-58; Loren, *supra* note 111, at 49-56. Much earlier, in 1988, William Fisher articulated a comprehensive taxonomy of the social benefits generated by creative and informational works, but did not attempt to formulate this taxonomy in the discourse of economics. See Fisher, *supra* note 26, at 1768-74; see also Fisher, *supra* note 38, at 10-12; Weinreb, *supra* note 104, at 1242 (characterizing human interactions that center around intellectual and artistic activity as public goods and observing that the "market model" cannot measure this sort of benefit).

Wendy Gordon's influential article acknowledged the existence of external social benefits resulting from certain uses of copyrighted works, and noted that often these external benefits "are not easily monetized." See Gordon, *supra* note 28, at 1631. Rather than attempting to incorporate nonmonetizable social benefits into an economic theory of fair use, however, she cautioned courts not to use nonmonetizability as an excuse "to make the copyright law an instrument of income redistribution." See *id.* at 1632. Gordon's later work ascribes more importance to nonmonetizable values in copyright law. See, e.g., Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent and Encouragement*, 41 *Stan. L. Rev.* 1343, 1351 (1989); Gordon, *supra* note 35; Gordon, *supra* note 128, at 1042-43.

discursive spaces within which cultures define values and set policy agendas.³¹⁰ He observes that, in addition to facilitating Newtonian markets, information and networked information technologies constitute, and are constituted by, knowledge communities.³¹¹ (In fact, this phenomenon has always existed--consider, for example, *The Wealth of Nations*, *The Federalist Papers*, *Das Kapital*, or *Mein Kampf*--but it is quite possible that digital networks amplify its effects.) It is through this irreducibly reflexive process, manifested in the public sphere as well as in the market, that the social meanings and structural roles of information are created and defined.³¹² Agre's analysis of the role of information and the centrality of the public sphere in the process of social self-definition suggests that where information is concerned, the neoclassical market model gets notions of value exactly backwards. Societal benefits (and costs) from the dissemination of information and the spread of information networks are not "an artifact of marginal 'externalities' "; rather, they are central elements in the social welfare equation.³¹³ What is needed is an economic model that takes these elements into account.

One place to begin constructing such an economic model is a provocative theory about the externality effects of information advanced by media scholar Benjamin Bates.³¹⁴ Bates takes as his starting point the generally- accepted observation that information goods fail to satisfy "basic economic and optimality conditions" such as the equality of marginal cost and marginal revenue.³¹⁵ Bates argues that this observation results from failure to identify all of the costs and benefits associated with information exchange. In particular, the use of information creates "ancillary value" for parties other than the immediate user, and Bates contends that this value should be factored into an economic model of the information market. The model should include not only "ancillary private value," but also the "ancillary social value" that accrues to society generally.³¹⁶ Examples of the latter include the benefits to society that flow from the use of information goods in education.³¹⁷ Bates suggests that markets recognize certain types of ancillary value, but that ancillary social value generally is not recognized by markets, and so is realized as a positive externality.³¹⁸ If so, then absent some form of government involvement in information markets, "firms and

³¹⁰ See Philip E. Agre, *The Internet and Public Discourse*, 3 *First Monday* (1998) [hereinafter Agre, *Public Discourse*]; Philip E. Agre, *Mixed Metaphors: Inscribing Social Visions in Networked Computers* (1997) (unpublished manuscript, on file with author) [hereinafter Agre, *Mixed Metaphors*].

³¹¹ See Agre, *Mixed Metaphors*, supra note 310, at 15-16.

³¹² See id. at 15-17; cf. Lawrence Lessig, *The Regulation of Social Meaning*, 62 *U. Chi. L. Rev.* 943 (1995); Cass R. Sunstein, *Social Norms and Social Roles*, 96 *Colum. L. Rev.* 903 (1996).

³¹³ See Agre, *Mixed Metaphors*, supra note 310, at 16-17; cf. T.G. Lewis, *The Friction-Free Economy: Marketing Strategies for a Wired World* 2-20 (1997) (arguing that digital information markets do not obey neoclassical microeconomic principles); Quah, supra note 296, at 7-10.

³¹⁴ See Benjamin J. Bates, *Information as an Economic Good: Sources of Individual and Social Value*, in *The Political Economy of Information* 76 (Vincent Mosco & Janet Wasko eds., 1988).

³¹⁵ See id. at 79. Neoclassical microeconomic theory holds that the supplier of a good will set the price so that, at a given level of demand, marginal revenue equals marginal cost. See Cooter & Ulen, supra note 25, at 25-26.

³¹⁶ See Bates, supra note 314, at 81-84.

³¹⁷ See id. at 81-84. Bates defines "ancillary private value" as a benefit that accrues to the information supplier. See id. This approach seems too narrow. One might also include under this heading benefits that flow to other identifiable private parties, as distinct from benefits that flow to society as an undifferentiated whole.

³¹⁸ See id. at 84-85.

individuals are more likely to overconsume information goods with high ancillary social costs and underconsume those with high ancillary social benefits.¹⁶¹⁹

A second source of insight into the diverse kinds of value generated by transactions in information is C. Edwin Baker's pioneering exploration of the patterns of supply and demand in mass media markets.³²⁰ Baker identifies ten categories of externalities produced by mass media products, including the "quality of public opinion and political participation"; recipients' interactions with others; recipients' impact on the information products available to others; "exposing and deterring abuses of power"; diffusion of information to nonpaying recipients; and positive and negative effects on the information's subjects and sources.³²¹ Some of these externalities accrue to distinct third parties, but many constitute ancillary social value (or loss). Nor should this surprise us. Logically, the nature and quality of the information available within a community will affect the nature and quality of human choices and interactions, individual and collective, in both the market and the public sphere.³²² Like Bates, Baker reasons that mass media products that generate net social benefits will tend to be underproduced. He also demonstrates that the demand for mass media products is shaped by the priorities of advertisers and thus presents a distorted picture of actual audience demand even without regard to externalities.³²³ He concludes that the demand expressed in mass media markets cannot possibly be a reliable or complete indicator of information products' value, or of audience needs and desires.³²⁴

These arguments about the importance of "ancillary" effects are based on the inherently transformative nature of information.³²⁵ It is likely, however, that some ancillary social value also results from the current

³¹⁹ Id. at 86; see also Coase, *supra* note 296, at 389-90 ("[I]f we ... use for the market of ideas the same approach ... [as] for the market for goods, it is apparent that the case for government intervention in the market for ideas is much stronger than it is, in general, in the market for goods.").

³²⁰ See C. Edwin Baker, *Giving the Audience What It Wants*, 58 *Ohio St. L.J.* 311 (1997).

³²¹ See *id.* at 350-66; see also Mishan, *supra* note 302, at 134-35 (classifying intellectual and cultural goods as "merit goods" or "demerit goods" based on the "interdependent utilities" they produce); cf. Fisher, *supra* note 26, at 1769-74 (identifying education, public debate, cultural diversity, and public access to information as among the social benefits produced by copyrighted works); Loren, *supra* note 111, at 49-54 (focusing on the socially-valued activities enumerated in § 107, the Copyright Act's fair use provision).

³²² See Agre, *Mixed Metaphors*, *supra* note 310; Agre, *Public Discourse*, *supra* note 310; Baker, *supra* note 320, at 352-58; Cohen, *supra* note 248, at 1006-07; Niva Elkin-Koren, *Copyright Law and Social Dialogue on the Information Superhighway: The Case Against Copyright Liability of Bulletin Board Operators*, 13 *Cardozo Arts & Ent. L.J.* 345, 400 & n.284 (1995); Netanel, *supra* note 36, at 347-51.

³²³ See Baker, *supra* note 320, at 328-29, 333-37, 336 (showing that "the success of advertiser-supported media will result in failure of more differentiated, competitive daily newspapers, of some general audience magazines, and of magazines that appeal to groups whose interests do not overlap with use of any particular set of consumer products" (emphasis added)); *id.* at 337-46 (showing that, in advertiser-supported media, competition among media products designed for the same demographic group wastes resources, drives out media products that might appeal more strongly to diverse groups, and thus produces less overall value); see also Bagdikian, *supra* note 226, at 111; Baker, *supra* note 226.

³²⁴ Baker is skeptical about the value of the market as a measure of social value in any event. See Baker, *supra* note 320, at 385-97; *infra* text accompanying notes 337-51.

³²⁵ See Bates, *supra* note 314, at 81 ("The use of information changes the system, not only for the individual using the information, but for others as well. Clearly, such changes in the system can result in changes in the status, relationships, and

common-ownership structure of creative and informational content, which facilitates cross-pollination--which in turn amplifies information's transformative effects. In a related vein, both Mark Lemley and Lydia Loren have suggested that certain uses of copyrighted works that produce uncompensated social benefits "may not be efficiently produced under a property rights licensing scheme."³²⁶ This is so, they argue, because the would-be user cannot capture the full value of his or her use as revenue. Accordingly, he or she will tend to undervalue the use, and will be unwilling to pay the price that the copyright owner demands.³²⁷ A particularly clear example is the reverse engineering of copyrighted software, which benefits competition in the abstract.³²⁸ In other cases, such as news reporting, public criticism and comment, scholarly research, and classroom instruction, users may be disinclined (or simply unable) to pass increased license fees through to their customer base because of limitations imposed by other institutional and social values--for example, the value placed on the free exchange of ideas in education, scholarship, and public debate, or the value placed on access to free public libraries and schools.³²⁹

In sum, the foregoing analysis suggests that the current market for creative and informational works generates at least two different kinds of ancillary social benefit. First, society--and all of the individuals who comprise it--realizes benefits from the content of certain works. Creative and informational works educate and inform the public, shape individual and community perceptions of the world, and set the parameters of public debate.³³⁰ Because positive externalities, by definition, are not compensated in the market, one would expect most of the demand for many works that generate positive externalities--most scholarly books and many specialized or technical journals, as well as the textbooks and other materials used in elementary, secondary, and university classrooms--to arise in the public and educational sectors.³³¹

opportunities of others within the system"); Baker, *supra* note 320, at 349 ("Many, probably most, of the media's effects on third parties occur through media content's effect on its audiences' thinking, beliefs, preferences").

³²⁶ Lemley, *supra* note 6, at 1056; see also Loren, *supra* note 111, at 51-53; Weinreb, *supra* note 104, at 1242.

³²⁷ See Lemley, *supra* note 6, at 1056-58; Loren, *supra* note 111, at 51-53; see also Gordon, *supra* note 128, at 1042.

³²⁸ See Lemley, *supra* note 6, at 1057-58; see also Lemley & McGowan, *supra* note 225, at 71-73 (describing social benefits accruing from reverse engineering of industry standard software platforms).

³²⁹ See Elkin-Koren, *supra* note 6, at 111-13; Lemley, *supra* note 6, at 1056-57; Netanel, *supra* note 36.

³³⁰ See Agre, *Public Discourse*, *supra* note 310; Agre, *Mixed Metaphors*, *supra* note 310; Baker, *supra* note 320, at 350-66; Cohen, *supra* note 248, at 1006-07; Elkin-Koren, *supra* note 322, at 400; Fisher, *supra* note 38, at 10-12; Fisher, *supra* note 26, at 1768-74; Netanel, *supra* note 36, at 347-51.

³³¹ Consider, as well, public television, public radio, and public arts funding programs--all of which are perennially challenged by those who believe the market is the best determinant of public benefit. Bates's theory casts additional doubt on that view. See generally Baker, *supra* note 226; Cass R. Sunstein, *Democracy and the Problem of Free Speech* (2d ed. 1995); Baker, *supra* note 320.

Indeed, for these reasons, Baker suggests that the incentive system established by copyright is perverse. He contends that by placing a premium on entertainment value and affording low protection to primarily factual works, copyright encourages the production of works with low social value. See Baker, *supra* note 320, at 326; see also Breyer, *supra* note 26, at 286-87 (suggesting that other, nonmarket systems for funding original expression might be better tailored to encourage the production of "serious" works); Lunney, *supra* note 6 (arguing that strong copyright protection for works with primarily entertainment value creates an unacceptable opportunity cost for society); Weinreb, *supra* note 104, at 1240-41 (noting the potentially market-distorting effect of the legislative grant of copyright). That result is less a consequence of copyright's protection of original

Second, social benefit accrues from the rights to access and use unprotected, public domain elements of existing works, and to re-use and transform existing works in certain settings and circumstances. These rights and practices lead to the development of creative and scholarly talents and, ultimately, to the creation of new works--from which society may benefit further.

In part, of course, information goods fail to satisfy what Bates identifies as "economic optimality conditions" because of the existence of intellectual property rights, which are expressly designed to allow pricing above marginal cost.³³² Thus, the intellectual property system accepts as inevitable a certain amount of "deadweight loss."³³³ The argument that monopoly pricing is sufficient to explain the peculiarities of information economics, however, begs the question. If the public is willing to pay the prices set by copyright owners, we must ask what the public believes it is paying for, and what copyright owners believe they are selling. Any answer to that question must take existing statutorily-mandated public access and use rights into account. Individuals do not buy copyrighted works out of an abstract sense of economic efficiency or authorial desert; they buy them for the benefits they expect to receive under the existing entitlements regime.³³⁴ Public and university libraries and school systems purchase works that they believe will generate benefits for their user communities, and count among those benefits those that the public law of copyright guarantees. Copyright owners consider both types of demand and the full range of expected uses of their works when setting prices. In short, both types of uncompensated positive externality are woven into the fabric of the existing market for creative and informational works; they are the background conditions against which the market operates.

The cybereconomists recognize that creative and informational works may generate benefits that are not captured by market transactions. From their point of view, that is precisely the problem with the current incomplete- entitlements regime. Digital CMS, in contrast, will allow copyright owners to internalize benefits that are properly "theirs."³³⁵ The above analysis suggests, first, that public access and use privileges do not in fact represent a tax on copyright owners to subsidize the reading public, as copyright owners have claimed.³³⁶ If anything, they represent a tax on the reading public to subsidize the creative

expression, however, than of the market- and advertiser-driven system that (as Baker so well explains) rewards popularity more highly than critical acclaim. See Baker, *supra* note 320, at 328-46. Moreover, as Baker realizes and as this Article attempts to show, extending property-like protection to facts and ideas in an effort to right any perceived imbalance would most likely make matters worse. See *id.* at 327.

³³² See Elkin-Koren, *supra* note 6, at 98-99; Fisher, *supra* note 26, at 1700-04.

³³³ See Elkin-Koren, *supra* note 6, at 99; Fisher, *supra* note 26, at 1700-04.

³³⁴ Cf. Meurer, *supra* note 38, at 881 (arguing that consumers will pay more for copyrighted works if they know that they can share them with family and friends).

³³⁵ See Hardy, *Proper Legal Regime*, *supra* note 46, at 1025-26 (characterizing private copying as an uncompensated externality); *supra* text accompanying notes 152-79; see also Goldstein, *supra* note 28, at 178-79; John Cirace, *When Does Complete Copying of Copyrighted Works for Purposes Other Than for Profit or Sale Constitute Fair Use? An Economic Analysis of the Sony Betamax and Williams & Wilkins Cases*, 28 *St. Louis U. L.J.* 647 (1984); Gordon, *supra* note 28, at 1630-32. See generally Netanel, *supra* note 36, at 323-24. This perspective underscores the institutional economists' point that coercion is in the eye of the beholder. See *supra* text accompanying note 301.

³³⁶ See *supra* text accompanying note 34. See also *supra* text accompanying notes 156-58.

public, both present and future.³³⁷ More important, it sheds further light on the discussion in section II.B, above, of the relation between public goods, private goods, and progress.

I have argued that the shift to a private-law model of intellectual property may substantially change the nature of progress. Consideration of the ancillary or externality effects of information suggests why. A positive externality that corresponds to a social benefit-- as opposed to an uncompensated benefit to a distinct third party or parties--is simply a public good by another name.³³⁸ The same public good analysis that is conventionally applied to creative and informational works applies equally to the access and reuse privileges afforded by the public law of copyright. These privileges are non-excludable; if the law and the "state of the copying art" afford them to one, they afford them to all. They are non-rivalrous; one consumer's exercise of his or her right to reverse engineer software or parody a creative work does not prevent others from doing so.³³⁹ Within the market arena, the ordinary consumer is unlikely to value the privileges provided for future creators highly enough to pay for them--particularly if he or she has been reeducated to believe in the importance of paying for the right to use intellectual property, whatever the circumstances.³⁴⁰ But the ordinary consumer benefits immensely from these and other privileged uses--from access to creative and informational works in public schools and libraries, from increased competition and greater product variety in software markets, and in countless other ways.

It follows that allowing copyright owners to internalize uncompensated benefits, as the cybereconomists recommend, would not simply reallocate a fixed, immutable surplus from consumers to producers. Instead, the property- and-contract-based model proffered by the cybereconomists would fundamentally alter the social welfare equation. The change would be both (re)distributive and qualitative; some shared social benefits would be replaced by privately- appropriated ones. The cybereconomists contend that their model would increase the value realized by both producers and consumers of information by enabling the

³³⁷ Cf. Ginsburg, *supra* note 34, at 15 (characterizing the fair use doctrine, when applied to "transformative" uses of copyrighted works, as "a hidden tax for critical creativity"). Ginsburg argues that the "hidden tax" is unjustified when fair use is invoked to excuse purely "consumptive" uses such as private copying. See *id.* at 15-16. She overlooks, however, that there may be a real, though indirect, relationship between present consumption and future creativity, that even purely consumptive use may produce valuable social benefits, and that it may in any case be difficult to differentiate *ex ante* between those consumptive uses that will generate future creativity and those that will not. See *supra* text accompanying notes 117-28.

³³⁸ Cf. Baker, *supra* note 320, at 316 n.14 ("[N]onexcludability as an aspect of a public good is usually thought of as referring to situations where any purchaser and each nonexcluded beneficiary get roughly the same type of benefit from the good, while the concept of externalities is more commonly used where the benefit or burden on nonexcluded third parties is of a different sort than that which enticed an individual purchase."). For that matter, so is a negative externality that corresponds to a social loss. The analysis in this Part focuses on the need to identify "social" externalities, or public goods, that inhere in the existing regime of entitlements in creative and informational works, and assumes some basis for distinguishing between "good" and "bad" public goods after they have been identified. For consideration of the latter question, see *infra* section III.B.2.

³³⁹ See *supra* note 25 (defining "public goods"); Baker, *supra* note 320, at 316 n.14.

³⁴⁰ Cf. Cohen, *supra* note 248, at 999 (applying public-goods analysis to the right to remain anonymous when accessing and viewing online material, and noting that "the perceived costs of forgoing access to desired reading material will rise, and the likelihood of reader hold-out will fall, as more reading material is technologically protected"). On the endogeneity of consumer preferences, and their responsiveness to norms inculcated by legal and political institutions, see *infra* text accompanying notes 351-55.

formation of markets.³⁴¹ That may be so. The analysis offered here suggests, however, that the correct question to ask is not whether the proposed changes in digital intellectual property rights will increase the value realized by markets. Rather, the question is whether the changes will increase the overall value realized by society--including the value realized both within and outside markets--under the current system.³⁴²

If society believes that the continued existence of certain public access and use rights is necessary to promote access and progress most effectively, and that the gains to society are thus greater under a regime of limited entitlements in digital works than they would be under a regime of "strong" private-law rights, then digital rights management technologies and digital shrinkwrap licenses are a market failure waiting to happen. In that case, we might plausibly conclude that divided ownership (or some equivalent adjustment) is necessary to offset private parties' failure to internalize fully the ancillary social value of information. More simply, in Papandreou's terms, we might conclude that given the special nature of creative and informational works, the current institutional structure does a better job of optimizing social welfare. At any rate, without a better understanding of these nonmarket effects and their relation to our conception of social welfare, we cannot say with any confidence that the cybereconomists' proposal is the right one.

2. Defining Social Welfare

Regardless of whether we begin the effort to model the market in digital works by positing the inefficiency of common ownership, by inquiring into the distribution of bargaining power, or by focusing on the ancillary value generated by creative and informational works, we discover that the model is indeterminate without an underlying conception of social welfare or utility. Something must be optimized, but what? And how should it be measured? The neoclassical model holds that overall utility is determined by aggregating the preferences expressed through the market, and is optimized when goods and resources are thereby allocated to those who value them the most. However, the notion that the market affords a comprehensive and reliable account of all relevant human desires and supplies an accurate measure of their fulfillment has been thoroughly and convincingly discredited. In particular, creative and informational works implicate preferences about individual and collective self-definition that are fundamentally external to the market.

As an initial matter, the neoclassical market-based lexicon of personal preferences and interests is radically

³⁴¹ See Bell, *supra* note 5, at 587-90, 601-08; Hardy, *supra* note 5, at 242-52, 254-58; O'Rourke, Copyright Preemption, *supra* note 5, at 62, 70-71; see also Goldstein, *supra* note 28, at 178-79 ("The logic of property rights dictates their extension into every corner in which people derive enjoyment and value from literary and artistic works. To stop short of these ends would deprive producers of the signals of consumer preference that trigger and direct their investments.").

³⁴² Even assuming that some degree of proprietary protection is needed to induce a work's creation, my analysis has suggested that, above a certain level of proprietary protection, market value and nonmarket value are inversely related. Basic mathematics dictates that where two variables are inversely related, it is impossible to maximize for both at the same time. Thus, another way of framing the problem is that we should set the level of proprietary protection for digital works in such a way as to maximize the sum of the market and nonmarket or public good value that would result. If, at some point, a further increase in the scope of protection would produce a drop in public good value that exceeds the increase in market value, we should decline to allow the increased protection. I am indebted to Phil Agre for suggesting this train of thought.

incomplete. Numerous scholars have demonstrated that people have preferences and interests concerning many matters—including (for example) working conditions and interpersonal interactions—that are nonmonetizable and wholly external to the market.³⁴³ It follows that the market is not capable of registering these desires, let alone measuring the extent to which they have been satisfied. Moreover, consumers qua citizens may recognize hierarchies of preferences. That is, citizens may have preferences about the sorts of preferences that the law should privilege or burden, even though (or because) they would not act on these preferences as consumers.³⁴⁴ In other words, citizens may have preferences about what constitutes a just, fair, and equitable system of social ordering. The public process of lawmaking, which neoclassical economists view as interference with market-based expression and satisfaction of preferences, in fact affords citizens the opportunity to express and satisfy preferences that the market ignores, undervalues, or disserves.³⁴⁵

³⁴³ See, e.g., G. Peter Penz, *Consumer Sovereignty and Human Interests* (1986) (summarizing nonmarket interests); Baker, *supra* note 36, at 34-35; Martha C. Nussbaum, *Flawed Foundations: The Philosophical Critique of (a Particular Type of) Economics*, 64 *U. Chi. L. Rev.* 1197, 1206-12 (1997); Amartya K. Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, 6 *Phil. & Pub. Aff.* 317 (1977); see also Ian Shapiro, *Richard Posner's Praxis*, 48 *Ohio St. L.J.* 999, 1001-08 (1987); Veljanovski, *supra* note 104. "Law and economics" scholarship in the neoclassical mode recognizes these preferences, if at all, as anomalies that need not be built into economic models precisely because the market is incapable of measuring them. See, e.g., Hardy, *supra* note 5, at 221-22 (arguing that nonmonetizable motives for creativity need not be factored into the copyright incentives analysis); Steven Shavell, *Contingent Valuation of the Nonuse Value of Natural Resources: Implications for Public Policy and the Liability System*, in *Contingent Valuation: A Critical Assessment* 371 (J.A. Hausman ed., 1993) (arguing that economic models for public decisionmaking should not include the nonmonetizable value placed on natural resources because such value is difficult to measure accurately).

³⁴⁴ See Jon Elster, *Ulysses and the Sirens: Studies in Rationality and Irrationality* (rev. ed. 1984); Penz, *supra* note 343, at 41-58; Sen, *supra* note 343, at 313-15; Baker, *supra* note 320, at 401-03; Sen, *supra* note 343, at 335-44; Cass R. Sunstein, *Disrupting Voluntary Transactions*, in *Nomos XXXI: Markets and Justice* 279, 285-87 (John W. Chapman J. & Roland Pennock eds., 1989); Cass R. Sunstein, *Legal Interference with Private Preferences*, 53 *U. Chi. L. Rev.* 1129, 1133-35, 1140-45 (1986) [hereinafter Sunstein, *Legal Interference*]. An example is a preference for affirmative action in hiring or school admissions. Individuals might support affirmative action policies precisely because they believe that without such policies, they would tend—either consciously or subconsciously—to favor candidates of the majority race. See *id.* at 1153-54.

³⁴⁵ See Baker, *supra* note 36, at 34-40 ("A right to define and determine one's being must include equal and real opportunities to participate in collective constitutive decisions as well as certain liberties pertaining to individual development and expression."); Baker, *supra* note 320, at 400-01; Sunstein, *Legal Interference*, *supra* note 344, at 1140-45. Of course, reaching a policy decision requires a method of aggregating these preferences, which in turn requires some way of making interpersonal comparisons. Neoclassically-oriented economists are right to regard this task as difficult, and public-choice theorists are right to see the potential for bias. Nonetheless, the method employed by the neoclassicists—using dollars as evidence of consumer preferences—does not seem *prima facie* more accurate or unbiased than the legislative method—using the votes of elected representatives as proxies for constituent preferences, and then aggregating the votes. See Hovenkamp, *supra* note 98, at 81-89, 94-106; Richard H. Pildes & Elizabeth Anderson, *Slinging Arrows at Democracy: Social Choice Theory, Value Pluralism, and Democratic Politics*, 90 *Colum. L. Rev.* 2121, 2145-83 (1990); *supra* text accompanying notes 273-90. The two methods are simply different, and might reasonably be expected to be useful in different sets of circumstances. In particular, given the constraints on positive consumer action discussed in section III.A, *supra*, and given that the market does not register certain preferences at all, voting seems a more useful method for making collective decisions based on the second-order preferences discussed in the text. See Hovenkamp, *supra* note 98, at 81-89, 94-106; Pildes & Anderson, *supra*, at 2145-86; *id.* at 2187 ("Voting aggregates individual choices—not individual preferences."); Stearns, *supra* note 102, at 1240-45. If the current system of voting is imperfect, looking for ways to improve it would seem a better route than abandoning entirely attempts to respond collectively to preferences of this type. See Pildes & Anderson, *supra*, at 2188-213.

In addition, individual preference-formation and decision patterns are subject to multiple sources of error and inconsistency.³⁴⁶ Since the future is unpredictable, individuals may miscalculate when deciding how to act on their preferences, or be unable to forecast how their preferences will change over time.³⁴⁷ Alternatively, due to incomplete or incorrect information or to "framing effects" produced by context-dependent reference points, individuals may be mistaken about what their own preferences are, or how strongly they are held.³⁴⁸ Bell's argument that consumers who want to retain the current fair use rules are simply mistaken as to their cost seems to be offered in this spirit.³⁴⁹ Bell, however, does not consider that individuals might prefer the current fair use structure for nonmonetizable reasons. The consumer, it seems, is right except when she wants to modify existing or emerging market institutions, in which case she is wrong. Without better information about why people feel as they do about fair use, that conclusion is premature. It is worth noting, too, that citizens' preferences also may be inconsistent due to the perceived incommensurability of different, sometimes competing, goods.³⁵⁰

Finally, neoclassical theories of consumer sovereignty take consumer preferences as given.³⁵¹ Modern economic theorists, in contrast, recognize that preferences are endogenously determined by a variety of factors, including imitation of others, advertising, and a variety of workplace, social, and political institutions that seek to inculcate particular behaviors.³⁵² A particularly salient example of the latter, in the context of digital works, is the recent call for a program of elementary and secondary education designed to expose children to the importance of intellectual property and of asking--and, presumably, paying--for permission to use it.³⁵³ The distribution of power in a contested exchange also will affect preference formation and expression. To the extent that transactions produce or constitute people, those who wield power will be able to shape the wants and habits of those who do not.³⁵⁴ It is this dynamic--altered preferences followed

³⁴⁶ See generally Cass R. Sunstein, Behavioral Analysis of Law, 64 U. Chi. L. Rev. 1175 (1997) (summarizing the insights of behavioral theory into human preference formation and decision making).

³⁴⁷ See Penz, *supra* note 343, at 69-77.

³⁴⁸ See *id.* at 63-68; Robert C. Ellickson, Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law & Economics, 65 Chi.-Kent L. Rev. 23, 35-40 (1989); Sunstein, Legal Interference, *supra* note 344, at 1166-68; Amos Tversky & Daniel Kahneman, Judgment Under Uncertainty: Heuristics and Biases, 185 Sci. 1124 (1974); Amos Tversky & Daniel Kahneman, Rational Choice and the Framing of Decisions, 59 J. Bus. S251 (1986).

³⁴⁹ See Bell, *supra* note 5, at 580-81.

³⁵⁰ See Nussbaum, *supra* note 343, at 1199-1203; Pildes & Anderson, *supra* note 345, at 2145-75. Radin's "incomplete commodification" proposal, see *supra* text accompanying note 109, with its commitment to a broadly defined conception of "human flourishing," addresses the incommensurability of market and nonmarket values. See Radin, *supra* note 64, at 62-75.

³⁵¹ See, e.g., George J. Stigler & Gary S. Becker, De gustibus non est disputandum, 67 Am. Econ. Rev. 76 (1977).

³⁵² See Bartlett, *supra* note 102, at 84-89; Bowles & Gintis, *supra* note 205, at 92-120; Galbraith, *supra* note 205, at 24-37; Chomsky & Herman, *supra* note 226; Douglass C. North, Institutions, Institutional Change and Economic Performance 7, 22, 42-43 (1990); Penz, *supra* note 343, at 89-113; Baker, *supra* note 320, at 404-11; Dugger, *supra* note 205; Lessig, *supra* note 312; Sunstein, *supra* note 312.

³⁵³ See NII White Paper, *supra* note 9, at 201-10; see also Peter Jaszi, Caught in the Net of Copyright, 75 Or. L. Rev. 299 (1996); Litman, Copyright Legislation, *supra* note 100.

³⁵⁴ See Bagdikian, *supra* note 226, at 223; Bartlett, *supra* note 102, at 89-97; Bowles & Gintis, *supra* note 205, at 128-35; Galbraith, *supra* note 205, at 131-43; Baker, *supra* note 320, at 408-09; Bowles & Gintis, *supra* note 245, at 206-07;

by altered behavior--that the Software Publishers' Association was hoping to trigger when it threatened to sue its members' licensees who engaged in unauthorized copying.³⁵⁵ This suggests, further, that the costs of collective action noted in section III.A, above, may be exacerbated by acculturation to the status quo.

In sum, markets are not only incomplete indicators of what people want, but there is also reason to be skeptical of what markets tell us about the fraction of human interests that they can purport to describe.³⁵⁶

Also, the term "market failure" is inescapably contingent. Its meaning depends on the indicia of social welfare that a market is supposed to optimize, and these goals are not predetermined and may change over time. Market failure, properly understood, encompasses not only cases in which the parties fail to transact, or find it too expensive, but also cases in which consensual, relatively costless transactions nonetheless fail to produce particular outcomes that have been defined to be socially valuable. When market institutions fail, use of the public process of lawmaking to reshape them is entirely appropriate. Market institutions are in and of human society, not a fixed axis around which human society revolves.³⁵⁷ Their structure, like the structure of nonmarket institutions, is necessarily a matter for collective choice.

How might these insights apply to the problem of rights in digital works? First, since information is so crucial to the construction of preferences (as any advertiser knows), transactions in information may have especially significant influence on the construction of both first- and second-order preferences. Information--including the information contained in works of art, fiction, and popular entertainment--mediates not only perceptions about what one wants to buy, but also beliefs about what sort of person one wants to become and what social outcomes one values.³⁵⁸ Access to information, in short, is important for both individual self-actualization and collective self-definition.

Self-actualization is an unpredictable process, however, for both individuals and societies. It is a truism that the desire for more information will depend on whether the perceived benefits of the information

Dugger, *supra* note 205; Goldberg, *supra* note 104, at 125.

³⁵⁵ See *supra* text accompanying note 234.

³⁵⁶ At least one economic theorist, Peter Penz, has concluded that subjective measures of consumer preferences--including the neoclassical "revealed preferences" criterion, which holds that whatever consumers want, defined by what they actually buy, is what will maximize their welfare--are suspect. As a way out of the thicket, Penz advocates reliance on an objective, or "human interests," criterion of consumer welfare. See Penz, *supra* note 343, at 139-225.

³⁵⁷ See Bartlett, *supra* note 102, at 195 ("Markets may be driven by an invisible hand, but the hand is attached to an arm of socially defined rights."); *supra* text accompanying notes 104-08; cf. Baker, *supra* note 166, at 786-88 ("[I]f the market controls resource use, human freedom requires that we be able to control the market structure. Because laws and societal norms are key elements in any market structure, the ability to control the structure, and hence freedom, requires collective decisionmaking.").

³⁵⁸ See Baker, *supra* note 320, at 402-03; Cohen, *supra* note 248, at 1006-07, 1014; Elkin-Koren, *supra* note 6, at 112; Netanel, *supra* note 36, at 347-51; Phan, *supra* note 175, at 208-10; cf. Bowles & Gintis, *supra* note 205, at 121-51 (arguing that individuals are not simply the rational "choosers" recognized by liberal economic theory, but also, and more fundamentally, "learners" through the iterative processes of market choice, interpersonal association, and democratic self-governance); Nussbaum, *supra* note 343, at 1203-06 (arguing that economic theory must acknowledge human agency).

outweigh its costs, but it is difficult to assess either benefits or costs before the fact.³⁵⁹ This is particularly so in the case of more complex creative or informational works. The process of discovery and retrieval of information introduces additional complications. The human mind does not always, or even usually, proceed in a linear fashion, but exploits chance discoveries and pursues unexpected links. The first person to imagine a web of information interconnected by associational (now hypertext) links--an information resource at once so sophisticated and so intuitive in operation that very young children can use it--did so with these characteristics in mind.³⁶⁰ It is possible to begin a search without having any idea what will prove important, and to end it with a collection of materials suggested by connections made along the way.

The existing public-law regime of copyright mitigates the uncertainties and path-dependencies that attend the discovery and acquisition of information by allowing individuals to browse before or instead of purchasing and to share and re-use acquired information.³⁶¹ The cybereconomists, in contrast, suggest that individuals should be required to search for and evaluate creative and informational resources with the meter running. Individuals might plausibly believe that a degree of fortuitous, nonmetered access to information advances their development, both as consumers and as citizens, better than Bell's system of "fared use" or Hardy's regime of strong, undivided property entitlements.³⁶² Certainly, there is insufficient evidence to conclude that they do not, or that such a preference would be irrational.

Second, in the case of copyright, there is an express constitutional mandate that the chosen system of exclusive rights promote "progress." As has been frequently observed, the degree to which any particular arrangement of rules is better or worse than any other arrangement at promoting progress, objectively defined, is an empirical question that may be inherently untestable.³⁶³ That formulation, however, begs the question whether progress is a wholly measurable quantity. As the recent debates about the desirability of cloning higher mammals attest, progress is at least in part a socially- determined construct.³⁶⁴ In

³⁵⁹ See Green & Shapiro, *supra* note 98, at 19 (citing Jon Elster, *Rational Choice* 19-20 (1986)).

³⁶⁰ See George P. Landow, *Hypertext: The Convergence of Contemporary Critical Theory and Technology* 14-16 (1992); Vannevar Bush, *As We May Think*, *The Atlantic Monthly*, July 1945, at 31-35.

³⁶¹ The Copyright Act gives copyright owners exclusive rights to make and distribute copies of works and to authorize public performances and displays, not rights to control all reading and viewing of their works. See 17 U.S.C. § 106 (1994); Litman, *The Exclusive Right*, *supra* note 100, at 39- 43. Statutory privileges to share and re-use works include the first sale doctrine, the fair use doctrine, and provisions governing library copying. See 17 U.S.C. §§ 107-109; *supra* text accompanying notes 27-31. Last, but by no means least, the Copyright Act expressly withholds protection from certain types of information, including facts, ideas, functional principles, and creative works whose term of protection has expired, on the ground that these things belong in the public domain where they may serve as building blocks for future works. See 17 U.S.C. §§ 102(b), 302-304; Litman, *supra* note 6; *supra* text accompanying note 32.

³⁶² See Elkin-Koren, *supra* note 6, at 112; cf. Bowles & Gintis, *supra* note 205, at 127-36 ("The ontology of a democratic economic theory must encompass learning as well as labor, the production and reproduction of people as well as the production of things."); Netanel, *supra* note 36, at 344-63; Phan, *supra* note 175, at 208-16.

³⁶³ See, e.g., Lemley, *supra* note 6; George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property*, 8 *Res. L. & Econ.* 19 (1986).

³⁶⁴ See, e.g., Brent Staples, *Editorial Notebook; Turning People into Product*, *N.Y. Times*, Feb. 28, 1997, at A34; George F. Will, *The Moral Hazards of Scientific Wonders*, *Wash. Post*, Feb. 26, 1997, at A19; see generally Latour, *supra* note 7 (challenging the constitutive modern paradigm of scientific objectivity); Agre, *Mixed Metaphors*, *supra* note 310 (arguing that information technologies and society constitute one another); Chon, *supra* note 192, at 114- 34 (1993) (rejecting the view that

addition, progress refers to a journey as well as a destination; hence (for example) the stringent rules regarding informed consent in medical experimentation, and the doctrine that precludes copyright protection for facts and ideas in order to ensure a robust public domain.³⁶⁵ The definition of progress in these latter two senses is something that individuals and the community constituted by them may have legitimate preferences about.

The resolution of the digital copyright problem will affect progress in unquantifiable ways. If libraries may not make digital works available to the public free of direct charge, there are some potential creators who will never see them.³⁶⁶ Similarly, some would-be authors who wish to use digital works in ways that copyright law considers fair uses will not do so, either for economic reasons or because the license that governs usage rights forbids it. The locus of control over progress will shift slightly, toward existing authors and away from poorer (or simply younger) authors. One could believe, as do the cybereconomists, that the system is simply adjusting to cure a pervasive and troublesome market failure, or to allocate future uses of digital works to those who are willing to pay for that privilege. As discussed above, however, one could also conceive the noncommodified "breathing space" the current system allows citizens for browsing, public domain use, and fair use to be a public good worth preserving--notwithstanding the fact that most consumers do not plan to reverse engineer software or publish a parody or critical essay directed at a literary work and would see no need to bargain in the market for the right to do so.³⁶⁷

Finally, instituting a regimented system of usage rights may undermine societal norms that have developed over time to mediate the boundary between private and public rights in creative and informational works.³⁶⁸ Two examples of such norms are the practice among research scientists of photocopying colleagues' professional journal articles that are relevant to their current or contemplated research, and the practice among university professors of preparing coursepacks for their students that contain photocopied excerpts from a variety of academic sources. Both norms currently are threatened as a result of appellate court

"progress" consists of accumulating objective "knowledge" for its own sake); Phan, *supra* note 175, at 208-13.

³⁶⁵ See 10 U.S.C. § 980 (1994); 17 U.S.C. § 102(b) (1994); 42 U.S.C. § 3515b (1994); *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991); Litman, *supra* note 6.

³⁶⁶ See John Browning, Excerpt from "What Is the Role of Libraries in the Information Economy?," in *Internet Dreams: Archetypes, Myths, and Metaphors*, *supra* note 24, at 55, 57 ("[I]f the books on a library's electronic shelves are not free ... what is left of the library's traditional *raison d'être*: namely, making information available to those who cannot afford to buy it?").

³⁶⁷ See *supra* text accompanying notes 330-42; cf. Cohen, *supra* note 9, at 182; Elkin-Koren, *supra* note 6, at 110; Madison, *supra* note 49, at 6-7 & n.14 (developing "open space" metaphor for this noncommodified aspect of the public law of copyright).

³⁶⁸ See, e.g., Ellickson, *supra* note 210, at 58-64 (discussing academic community norms regarding photocopying of copyrighted works); cf. Samuel Bowles & Herbert Gintis, *The Revenge of Homo Economicus: Contested Exchange and the Revival of Political Economy*, 7 *J. Econ. Perspectives* 83, 95-96 (1993); Sen, *supra* note 343, at 331-32. This appears to be exactly what advocates of the private-law approach intend. See, e.g., NII White Paper, *supra* note 9, at 201-10 (recommending education as to "what is 'mine' versus what is 'not mine'" beginning at the elementary school level); *supra* text accompanying note 355.

decisions that the copying is not a fair use of the copyrighted content.³⁶⁹ According to both courts, this is so regardless of accepted practice in scholarly and research communities, because there now exist market mechanisms to license photocopying rights.³⁷⁰ Thus, both decisions rest on the same narrow view of the fair use doctrine espoused by the cybereconomists; their implicit premise is that the fair use doctrine is a cure for market failure and nothing more.³⁷¹

Norms favoring information-sharing in research and classroom settings are valuable both instrumentally, in that they advance thriving traditions of scholarship and social commentary, and intrinsically, in that they foster a climate of openness and intellectual exchange.³⁷² The switch to a system of strong property rights might jeopardize these social accomplishments and values by rendering them superfluous given the practical realities of access to creative and informational content.³⁷³ In addition, of course, a private-law regime of rights in digital works would make many information-sharing practices unlawful.³⁷⁴ It would be legitimate and entirely rational for the public to decide that these practices and the values they serve are, instead, important and worth preserving.

The question what preferences the public has regarding rights in digital works has many possible answers. It is plainly incorrect, however, to foreclose many of these answers at the outset, on the ground that we cannot look to markets to measure their importance. The cybereconomists' proposal would have us do precisely that. At worst, this approach ignores or trivializes important public values and priorities. At the very least, it is simply premature. Before adopting a private-law regime of rights in digital works on the ground that it would best promote social welfare, we must reach a considered, collective decision about what social welfare means. Contrary to the cybereconomists' arguments, there is ample basis from which to conclude that a public-law, limited-entitlements regime is best-suited to promoting our individual and collective development.

IV. Coda: Of Market Failures and Technological Imperatives

As this Article has shown, the neoclassical market model for digital property rights ignores or assumes away issues of immense theoretical and practical significance. A realistic model for the market in digital works should explore the effect of legal rules on the formation of market institutions, as the cybereconomists (in particular Merges) do. However, it also must attempt to understand the ways in which the existing

³⁶⁹ See *Princeton Univ. Press, Inc. v. Michigan Document Serv., Inc.*, 99 F.3d 1381 (6th Cir. 1996) (en banc); *American Geophysical Union v. Texaco, Inc.*, 60 F.3d 913 (2d Cir. 1994).

³⁷⁰ See *Princeton Univ. Press*, 99 F.3d at 1387-88; *American Geophysical*, 60 F.3d at 929-31.

³⁷¹ See *supra* text accompanying notes 27-29.

³⁷² On the importance of information-sharing norms in research, see Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. Chi. L. Rev. 1017 (1989); Robert P. Merges, *Property Rights Theory and the Commons: The Case of Scientific Research*, 13 Soc. Phil. & Pol. 145 (1996); J.H. Reichman, *Computer Programs as Applied Scientific Know-How: Implications of Copyright Protection for Commercialized University Research*, 42 Vand. L. Rev. 639 (1989).

³⁷³ See Bowles & Gintis, *supra* note 205, at 95-96.

³⁷⁴ Cf. Richard Stallman, *The Right to Read*, 40 Comm. ACM 85, Feb. 1997.

distribution and social construction of property rights, and the convenient presumption of particularized assent to standard form contract terms, are themselves institutional choices that shape market outcomes. In addition, a model that attempts to relate "property" to "progress" must consider the public-good nature of creative and informational works, and cannot assume equivalency between private wealth and social gain. Like the jurists of the *Lochner* era, the cybereconomists assume too much and prove too little about the rightness of their desired regime.

The broader spectrum of economic research and theory suggests that in order to determine the optimal system of rights in digital works, we must inquire into the potential asymmetries of power that may inhere in technologically-mediated transactions in usage rights. In addition, we must attempt to assess all of the benefits and costs--including externalities--generated by our current regime of incomplete property entitlements in creative and informational works, in order to determine whether a digital CMS regime would result in a net gain or a net loss for society, as distinct from a net gain to participants in markets. And we cannot do either of these things without a considered, societal decision regarding the market and nonmarket purposes a system of rights in digital works is supposed to serve, and the extent to which author/owner control furthers or disserves those purposes.

It is worth reflecting, finally, on the role of technology in effectuating an economic vision of digital intellectual property rights--whether it be the simple, Newtonian model proffered by the cybereconomists or the more complex, post-Newtonian model for which I have attempted to lay the groundwork. I have argued that the choice between more flexible access policies and digitally metered, fully-commodified usage rights is not a simple choice between market failure and (by implication) market success. Digital technologies, and in particular digital CMS, unquestionably have the potential to eliminate certain market failures recognized as significant within the neoclassical market-centered paradigm. Yet by maximizing the economic return to the digital content owner and externalizing the costs of decreased accessibility to members of the public, digital CMS may create or exacerbate other, arguably more significant, types of market failure.

For the cybereconomists, however, the move to a digital CMS regime is both desirable and technologically inevitable. Digital technology enables the complete determination of property rights and facilitates their exchange in relatively frictionless Coasean markets not just because it should, but because it must. Critics of private-law models for digital intellectual property rights have largely acceded to this description of the direction in which digital rights management technologies will take us.³⁷⁵ This is so, I suspect, because the cybereconomists' "technological imperative" resonates with deeply-held social beliefs in the inexorable, rationalizing force of technical advance--beliefs that, like so much else in our economic and political theory, trace back to the period of the Enlightenment and the Industrial Revolution.³⁷⁶

The power of this narrative is such that one hears surprisingly little about the possibilities of designing

³⁷⁵ I include myself in this group. See Cohen, *supra* note 9, at 177.

³⁷⁶ See Ellul, *supra* note 7; Mumford, *supra* note 7; Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (1977); *supra* text accompanying notes 17-19.

technological alternatives for managing rights in digital works. Digital technology is theorized as politically neutral and developmentally linear; the problem, if there is one, lies in humanizing its presumptively inhuman face.³⁷⁷ Yet surely that is too simple; technology is not destiny. Rather, our perception of possible technological solutions is colored by our approach to market and legal institutions, and vice versa.³⁷⁸ The fully-commodified approach to digital rights management gains normative force from the narrative power of the neoclassical market model, and the neoclassical market model demands, in return, to be implemented via technologies that minimize friction and internalize uncompensated benefits. The economic ideology that produced *Lochner* has embraced digital CMS as a means of achieving fruition. A social commitment to "incomplete commodification" or to reconceiving fair use privileges as publicly-owned property rights would suggest a different approach to structuring technologically-mediated transactions in digital works.³⁷⁹

The question what a different, more multi-faceted rights management system might look like is a subject for another article. The problems involved in the design of such a system are complex--all the more so because existing rights management systems have been designed to preempt the flexible, equitable, context-sensitive judgments that constitute our current system of fair use.³⁸⁰ Effectuating a noncommodified or incompletely-commodified approach to digital intellectual property rights requires a new trajectory for policy and technology alike. Digital systems capable of making or assisting such contingent, nonprogrammable policy judgments are a long way from reality, and we have at best an imperfect understanding of what such systems might look like.³⁸¹ This does not mean, however, that digital rights management technologies and equitable access rules are necessarily incompatible. It simply means that there is much work to be done in creating the discursive space within which the desired regime can flourish.³⁸²

The notion of designing digital systems to incorporate a degree of superficial transactional inefficiency is less unusual than it seems. One notable recent example is the installation of "circuit breakers" in the trading

³⁷⁷ See James Boyle, Foucault in Cyberspace: Surveillance, Sovereignty, and Hard-Wired Censors, 66 U. Cin. L. Rev. 352 (1998).

³⁷⁸ See Boyle, *supra* note 168; Agre, *supra* note 310; Lessig, *supra* note 264, at 96; Lawrence Lessig, The Zones of Cyberspace, 48 Stan. L. Rev. 1403, 1408 (1996); Lawrence Lessig, What Things Regulate Speech 38 Jurimetrics J. 629 (1998); cf. Stefik, Shifting the Possible, *supra* note 24, at 156 ("Trusted systems do not exist in a vacuum. They exist in a social framework. The search for balance involves the design of appropriate social institutions.").

³⁷⁹ See *supra* text accompanying notes 100-16.

³⁸⁰ See *supra* text accompanying notes 30-32.

³⁸¹ A promising start is Stefik & Silverman, *supra* note 136, at 13-14. Stefik and Silverman suggest a Digital Property Trust that would grant "fair use licenses" to qualified parties, who could then "exercise privileged rights on the digital work not normally available." See *id.* at 13. Their fair use licensing system also would include insurance designed to protect digital publishers against the possibility of abuse by professed fair users. See *id.* The proposal intentionally leaves a number of important questions unanswered-- should there be a charge for the fair use license? who may qualify for a license? who decides what uses are "fair"? who pays for the insurance? what measures will be taken to be protect fair users' privacy rights?--and fails to note others--might the system be designed to permit certain uses without pre- screening? is insurance for publishers really necessary?. Nonetheless, it represents precisely the kind of innovative thinking that will be required to solve the fair use problem.

³⁸² See *supra* text accompanying notes 310-12.

systems at the New York Stock Exchange following the October 1987 stock market crash. Investigators concluded that the crash was caused in part by automated "program trading" by high-volume investors, in part by existing computer systems' inability to handle the large volume of orders, and in part by the panic and communications breakdowns that ensued when the market began to drop rapidly as both individual traders and automated trading programs tried to sell and found no buyers.³⁸³ The circuit breakers are designed to "slow the action on turbulent days and give cooler heads a chance to prevail";³⁸⁴ they accomplish this by halting computerized program trading for a preset time period when the Dow Jones industrial average falls a specified amount in a single trading session, and by halting all trading if the Dow falls too far.³⁸⁵ The market has fallen far enough to trigger the circuit breakers on several occasions since their installation, and none have become panics.³⁸⁶ This example suggests that "friction" in human transactional systems may sometimes serve valuable collective ends.

It is clear that some hard thinking is needed to tailor intellectual property paradigms to the digital world. It also should be clear, however, that the most commodified solution is not necessarily the best one, and that the search for the best solution should involve all affected interests. Technological changes that will have distributive consequences are a proper subject of attention for policymakers and the public as well as for owners and technologists. The appropriate entitlements structure for digital works should be chosen not just because technology enables it, or because it comports with a familiar story about the nature of property rights and markets, but because it represents a sound and wise policy for managing our society's creative capital.

³⁸³ See Report of the Presidential Task Force on Market Mechanisms (1988) [[hereinafter Report on Market Mechanisms]; Kurt Eichenwald & John Markoff, Wall Street's Souped-Up Computers, N.Y. Times, Oct. 16, 1988, at C1. "Program trading" is automated portfolio trading executed by computers programmed to respond to designated price fluctuations. See Report on Market Mechanisms, *supra*.

³⁸⁴ John J. Phelan, Jr., Setting Controls on Volatility in the Securities Market, Chi. Trib., Nov. 6, 1989, at C19.

³⁸⁵ See Kurt Eichenwald, Black Monday Crash: 'A Blessing in Disguise'--On Fifth Anniversary, Markets Healthier, N.Y. Times, Oct. 19, 1992, at D2; Floyd Norris, Stocks Fall 554 Points, Off 7%, Forcing Suspension in Trading, N.Y. Times, Oct. 28, 1997, at A1.

³⁸⁶ See Norris, *supra* note 385; Eichenwald, *supra* note 385. Although some naysayers believe that the circuit breakers would be unnecessary if trading systems were seamlessly integrated to provide perfect, real-time information, see, e.g., Roy C. Smith, NYSE Riskily Clings to People Over Electronics, Newsday, July 14, 1991, at 30, scientists who study chaos theory have concluded that "panics" and other "irrational" responses are inevitable in any system so complex see Eichenwald & Markoff, *supra* note 383. This is consistent with Polanyi's historical argument, made fifty years before, that money is a "fictitious commodity" and that the market in money will periodically require stabilizing interventions to avoid social disruption. See Polanyi, *supra* note 189, at 71-75; *supra* text accompanying notes 195-98; see also Report on Market Mechanisms, *supra* note 383, at 66 (arguing that circuit breakers are "inevitable" because of "natural limits to market liquidity").