

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

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Ninety-three years ago, in *Lochner v. New York*, 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. 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. 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.

In fact, however, the economic vision embodied in *Lochner* is alive and 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. 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. However, the economic case they build is anything but convincing. It is based on an 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. 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. 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, has found favor with government policymakers, who have used similar reasoning to frame legislative and treaty recommendations. 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.

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

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. Within this vision, legislative authority to shape default rules for social conduct encompassed only the specific terms of the original compact. 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. In reality, turn-of-the-century governments undertook a broad variety of economic legislation pursuant to their recognized authority to promote the "general welfare." 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. 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.

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. 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. 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 and distribute them to the public. 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. 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. 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.

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 has expired. 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. 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.

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. 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.

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. 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.

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, 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. 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.

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 last; the result, Bell contends, is better for everyone. 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." 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.

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, Hardy argues that (at least in cyberspace) copyright should be abandoned altogether in favor of strong, undivided property entitlements. Just as the Lochner-era Court reasoned that minimum wage laws "amount[ ] to a compulsory exaction from the employer," 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. 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. Because the new rights management technologies make it relatively inexpensive to 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.

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. 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, 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. These voluntarily constituted "collective rights organizations" will develop procedures for pricing the rights they administer and remitting royalties to members, and will represent a simple, coherent menu of prices and other terms to licensees."

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. 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. Thus, 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." It follows that copyright owners ordinarily "should be free to craft contracts as they see fit."

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. 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.

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. 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. 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. However, they would find this condition satisfied, and allow courts to invalidate such terms, only if the copyright owner or group of copyright owners has antitrust market power. In addition, O'Rourke offers qualified support for a rule requiring conspicuous disclosure of contract terms that diverge from copyright.

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.

This Part examines the economic arguments for a private-law approach to digital intellectual property, and finds them unconvincing. Section I.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. Second, they assert that the legislative process is comparatively unsuited to accomplish these ends because it is coercive and controlled by special interests. 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, 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. Both are necessary (though not sufficient) requirements for an "unregulated" market to reach the efficient equilibrium point; the absence of either or both may signal a market failure justifying some form of adjustment. 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. 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. 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 that the Uniform Commercial Code was created to address. 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. Both types of terms are, however, presumptively enforceable if the applicable disclosure standards were met. The UCC does authorize refusal to enforce terms that are unconscionable, but the threshold for unconscionability is high. 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. 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. For purposes of this discussion, the important thing 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. 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.

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. 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. 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. Moreover, even if Congress did so intend, the intellectual property clause of the Constitution arguably would exert independent preemptive force.

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. Recently, the Seventh Circuit interpreted this test in a way that indicates its 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. 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. 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. Moreover, there is a substantial difference between shopping for price - something that many consumers of mass-marketed products do, and do well - and shopping for terms, which is much more difficult .

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. 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. 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. Use of the neoclassical conception of contract to bootstrap voluntariness and "reasonableness" in this setting strains logic to the breaking point. 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. 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. 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. 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." 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.

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. 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. This perception underlies Hardy's description of copyright legislation and Merges' depiction of the rate-setting process under the legislated compulsory license for sound recording rights. 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.

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. 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. As discussed above, the market we have is not 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.

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. 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. This is a choice that would matter; it may well be that in the perfect, costless world, the market 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. 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. It also might promote the goals of access and progress more effectively than the private-law model that the cybereconomists prefer.

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. 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. 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.

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. 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. 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. 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. 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 the same error. Declarations of entitlement are definitional, public acts and should be understood as such. 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. 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, for virtually identical reasons. The similarity is underscored by Merges's unequivocal rejection of legislatively-mandated "liability rules" in the intellectual property context. 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 assuredly 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.

### 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. However, Demsetz implicitly presumes both knowledge about effective long-term growth strategies and reduced costs of implementing these strategies under a private-ownership system. 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. This is precisely what is disputed in the current debate over the scope of copyright in digital works. 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, 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. 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. 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. 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. Thus, it is at least conceivable that vesting existing authors/owners with absolute control over the terms of access would deter or prevent the creation of some valuable works that would be produced under the current system. 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. 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.

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

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. 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. 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. 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. Most significantly, the decrees prohibit ASCAP and BMI from holding or licensing any rights in copyrighted musical compositions other than the public performance rights. 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 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. 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. 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. 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.

Both Hardy and Merges also rely, in different ways, on the conventional wisdom that lowered transaction costs favor property rules to encourage bargaining. In fact, it is not so clear that digital networks will lower transaction costs in all cases. 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. This ignores a substantial recent literature suggesting that the choice between property rules and other types of rules depends on a number of factors, of which transaction costs is only one. 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. 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). 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.

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. Thus, they are able to characterize the legislative process that shapes the public law copyright as a wasteful cost of transacting rather than a necessary cost of production. 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. 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. 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.

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. The argument that the law will encourage the most progress 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.

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. Legislation restricting prospective uses of property, if generally applicable, was presumptively legitimate. 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 forward-looking, character derived from an "ideal boundary" between the owner and society. Within this vision, property rights and freedom of contract were inextricably related. Both originated in the prepolitical sphere and thus outside public control. 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. 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.

The definition of intellectual property as profit potential also dates from the *Lochner* era. It has largely escaped comment that *International News Service v. Associated Press*, in which the Court defined news as quasi-property based on a misappropriation theory, was a *Lochner*-era case. *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. 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. 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. 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. 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, we might conclude that nuisance laws and antidiscrimination restrictions are justified because the negative externalities the prohibited conduct would impose outweigh any incremental benefit derived from increased incentives. 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. *Hardy and Merges* do not consider whether either analysis might apply to digital works. 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. The scope of such a property right can only expand. Thus, this understanding of property inevitably enables the aggrandizement of existing entitlement - more often than not at the expense of third parties whose current practices or privileges, because not considered "property," are not perceived as obstacles. The cybereconomists justify their proposed regime as a mere efficiency enhancement that will improve the position of some at no detriment to others. The fact of controversy, however, tends to suggest otherwise; if the proposed change were really Pareto-optimal, there would be no reason for anyone to oppose it. 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.

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." Invoking the antiredistributive 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. 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. 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. 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. But (as 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. 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. 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.

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. 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. 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. (Although 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.) 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. 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. 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. These countermeasures in turn incur criticism for their disruptive effect on the market and their inconsistency with market principles.

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 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. 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. 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.

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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 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.

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. 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. 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. 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. 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 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. 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, or by some combination of the two - in order to maximize profits. Thus, consumer preferences exercise considerable, in 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. 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." Such exchanges, they reason, will be contested, meaning that the party concerned with a particular attribute of 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.

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." 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 neoclassical model

presumes. Bowles and Gintis demonstrate that, at least in the labor market, this is not the case. 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 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.

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.

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. 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 product quality and consumers have short-side power. 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. 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. 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. 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. 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.

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. 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.

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. Consistent with the received neoclassical tradition, however, they seem to regard either form of market power as the extraordinary case. 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. In recent years, many of the major copyright industries have undergone enormous consolidation. 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. 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. 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 acknowledged. Both episodes may represent little more than skirmishes in a larger contest 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. In addition, some devices caused system crashes and peripheral device failures. These problems spelled disaster for organizational users that relied on the copy-protected software to run their operations. 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.

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." Meanwhile, software firms began to redesign the offending devices. More recent efforts 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. 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 copy-protection regimes are beginning to achieve market penetration among corporate customers.

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 and prevents second-generation copying. 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. Although anti-copying devices exist, there is no evidence suggesting that substantial numbers of ordinary consumers use them.

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. Experiments with different bundling and fee structures for Internet delivery of specialized content to various technical and academic markets are now underway. Library organizations are working to develop 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. 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.

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." It is structural only; individual consumers generally cannot initiate directed changes in the pattern of supply. 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. To capitalize on the structural power of aggregate demand in a conscious fashion, ordinary consumers must overcome significant collective action and information costs. 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 protest activity - but they cannot eliminate them. 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. 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. 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 digitalCMS. Consumer organizations have grown more skilled at sensing and responding to industry initiatives, but are comparatively underfunded and understaffed.

This structural producer-consumer imbalance is amplified by real-world legal and market institutions that discourage consumer agency. As discussed in section ILA, 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. 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. Under such a regime, moreover, "the firm's power does not depend on its being large within a particular market." In the non-digital world, the coercive nature of the standard form is mitigated by the fact that many consumers simply ignore the restrictions. 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. 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. 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.

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. 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. 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. 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. Elsewhere, I have argued that the law should not 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. Considered within the "contested exchange" framework, such technological countermeasures are simply consumers' way of attempting to restore "bilateral power" to the contest. 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. 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. 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. 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 observe that the more powerful party to a contested exchange will attempt to 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. 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. 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. 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 of digital works.

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

The cybreeconomists 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. 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. When legislative change 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. 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. 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. 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.

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 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. 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. 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. As noted above, copyright owners have a long history of seeking, and receiving, expanded rights and other special protections from Congress.

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. 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. During that time, the coalition and its members worked with sympathetic legislators to submit competing legislation and to propose amendments to the opposing bills - steps that they would not have been able to take in the consumer mass market. As a result of this input, the anti-circumvention legislation ultimately enacted differs significantly from that originally proposed.

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 with the result that the barriers to collective action are even harder to overcome. 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. 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. 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 ILB discussed, in the case of copyrighted works one cannot simply assume that private wealth and social welfare are equivalent. Once one allows for a broader conception of overall 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. 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. 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

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. 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. 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. 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." 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. Information, by contrast, is intangible; as a result, its effects on society and social structure are poorly understood. 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. 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 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 overharvesting of a natural resource. 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. 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. 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. 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. Because institutional theory expressly acknowledges the 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. 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. 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. 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. Computer applications programs and user interfaces also generate network 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.

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. However, until very recently, none has attempted to develop a more detailed economic model of these benefits. 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 discursive spaces within which cultures define values and set policy agendas. He observes that, in addition to facilitating Newtonian markets, information and networked information technologies constitute, and are constituted by, knowledge communities. (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. Agre's analysis of the role of information and the centrality of the public sphere in the process of social selfdefinition 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. 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. 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. 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. Examples of the latter include the benefits to society that flow from the use of information goods in education. 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. If so, then absent some form of government involvement in information markets, "firms and individuals are more likely to overconsume information goods with high ancillary social costs and underconsume those with high ancillary social benefits."

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. 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. 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. 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. 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.

These arguments about the importance of "ancillary" effects are based on the inherently transformative nature of information. It is likely, however, that some ancillary social value also results from the current 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." 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. A particularly clear example is the reverse engineering of copyrighted software, which benefits competition in the abstract. 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.

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. 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. 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. Thus, the intellectual property system accepts as inevitable a certain amount of "deadweight loss." 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. 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." 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. If anything, they represent a tax on the reading public to subsidize the creative public, both present and future. More important, it sheds further light on the discussion in section ILB, 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. 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. 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. 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 formation of markets. 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.

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 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. 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.<sup>344</sup> 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.

In addition, individual preference-formation and decision patterns are subject to multiple sources of error and inconsistency. 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. 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. 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. 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.

Finally, neoclassical theories of consumer sovereignty take consumer preferences as given. 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. 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. 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. It is this dynamic - altered preferences followed 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. 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. 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. 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. 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 outweigh its costs, but it is difficult to assess either benefits or costs before the fact. 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. 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. 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. 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. 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. In 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. 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. 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.

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. 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 decisions that the copying is not a fair use of the copyrighted content. 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. 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.

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. 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. In addition, of course, a private-law regime of rights in digital works would make many information sharing practices unlawful. 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 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. 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.

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

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. 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. 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.

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 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. The circuit breakers are designed to "slow the action on turbulent days and give cooler heads a chance to prevail"; 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. The market has fallen far enough to trigger the circuit breakers on several occasions since their installation, and none have become panics. 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.