THE END OF FRICTION? PROPERTY RIGHTS AND CONTRACT IN THE "NEWTONIAN" WORLD OF ON-LINE COMMERCE

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ARTICLE

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ROBERT P. MERGES[†]

TABLE OF CONTENTS

I.	INTRODUCTION	
	A. Varieties of Transaction Costs	116
	B. Encryption	117
	C. Self-Reporting Content	
П.	PROPERTY RIGHTS AND CONTRACT IN CYBERSPACE	E 118
	A. The Problem of Privity	119
	B. Overcoming A Break in the Chain of Privity	
	C. The Property-Contract Interface	
	D. Digression on Informal Restrictions in Cyberspace	
	E. Summary: A Three-Tiered Regime	129
Ш.	FAIR USE: THE END OF THE "MARKET FAILURE"	
	RATIONALE?	
	A. The Remnants of a Market Failure Rationale	
	B. Towards A New (Old) Conceptual Foundation?	
	C. A Brief Word on Intellectual Property and Subsidies	
IV.	CONCLUSION	136

I. INTRODUCTION

Law on-line, or in cyberspace, is a big topic. This essay discusses one aspect of it: the respective roles of contract and property rights. In particular, I will concentrate my remarks on two particular issues. First, I will discuss why property rights are necessary in cyberspace. Second, I will examine the role of the "fair use" doctrine in copyright law. Conditions in cyberspace at least partially undermine the prevailing "market failure" theory that informs this doctrine. Instead of abandoning the doctrine, which I believe serves some important goals, I advocate an

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alternative proposal. At least where markets are robust, we should return to the doctrine's redistributive roots, in effect giving small subsidies for certain users of copyrighted works.

Before moving on, I must clarify some background issues.

A. Varieties of Transaction Costs

Arguing, as some have, that transaction costs are negligible in the on-line environment is an oversimplification.¹ This position ignores many important types of transaction costs.² The conventional account lists four such costs:

- Identifying potential buyers and sellers;
- Negotiating deals;
- Measuring performance (e.g., metering use); and
- Enforcing agreements.³

Cyberspace does not eliminate all of these sources of transaction costs. In many cases, it eliminates the first; the on-line environment effectively brings buyers and sellers together, regardless of their location. The early success of such on-line businesses as sports scores and information, flower delivery, and stock photography attests to the dramatic lowering of this first type of transaction cost. But that still leaves the other three types of costs.

While the on-line environment is theoretically capable of facilitating the bargaining process between buyers and sellers, existing commerce does not reveal much promise. Parties conduct almost all commerce on a "take it or leave it" basis. Transactions that require negotiation, such as the consummation of an offer to purchase a car, stock, or franchise, usually occur off-line. Of course, using the Internet, both parties can cheaply discover alternative deals that may be available. But this exerts only an indirect effect on negotiations, presumably making it more difficult to bluff or take advantage of information asymmetries. In general, cyberspace does not appear to lower negotiation costs in most cases.

Cyberspace does lower the cost of enforcing deals, sometimes radically. I refer to the plethora of technological systems, some in place, many more proposed, designed to prevent the use of digital content without authorization. These systems take various forms, but at the risk

^{1.} See, e.g., Richard Allan Horning, Has Hal Signed a Contract: The Statute of Frauds in Cyberspace, 12 SANTA CLARA COMPUTER & HIGH TECH. L.J. 253, 256 (1996) ("By linking buyers and sellers electronically and eliminating paperwork,... transaction costs should drop dramatically.").

^{2.} See generally OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985); Howard A. Shelanski & Peter G. Klein, Empirical Research in Transaction Cost Economics: A Review and Assessment, 11 J.L. ECON. & ORG. 335 (1995).

^{3.} THRAINN EGGERTSSON, ECONOMIC BEHAVIOR AND INSTITUTIONS 14-16 (1990).

of oversimplification I will briefly discuss only two: (1) encryption, and (2) self-reporting content.⁴

B. Encryption

Encryption, hailed as the keystone in the architecture of cyberspace, is the technology that will supposedly drive this powerful new engine of commerce. These claims, however, are exaggerated. Alone, encryption guards only one link of a potentially very long commercial chain: the original exchange between seller and buyer. To be sure, a chain with one titanium link is stronger than an entire chain made of weaker metals. Conversely, if the chain is vulnerable at several points, a single titanium link might not prevent a break in the chain.

The vulnerability inherent in encryption technology arises when the digital content is decrypted, which is a necessary step in its use. Once decrypted, the digital content may be subsequently transferred in an unencrypted form. This new but weaker link in the chain of possession represents another point of vulnerability for the digital content owner.⁵ Below, I will discuss how to prevent uncompensated uses further along the chain of possession.

C. Self-Reporting Content

Imagine a chain with sensors on every link. If a link were weakened, it would send a warning signal to an operator for restoration or replacement. This is one analogy for what I label the self-reporting content model. Alternatively, the model could be designed not to warn of failure, but simply to report each use. The analogue in the chain example is a link that reports every time it goes around a sprocket, which would assure the rightful owner full compensation for the chain's use.

In sum, if the self-reporting content and encryption technology systems worked perfectly, they would dramatically lower the monitoring and enforcement costs associated with information exchanges.⁶

^{4.} See generally Mark Stefik, Shifting the Possible: How Trusted Systems and Digital Property Rights Challenge Us to Rethink Digital Publishing, 12 BERKELEY TECH. L.J. 137 (1997).

^{5.} I do not mean to argue that encryption does not strengthen the de facto protection available to a seller of content. The point is simply that the enhancement is not complete; the content may still be subject to misuse down the line.

^{6.} Not to zero, of course; these systems are expensive to design and implement (for instance, consider the costs of embedding self-reporting features in every piece of digital content).

II. PROPERTY RIGHTS AND CONTRACT IN CYBERSPACE

The on-line community is highly intolerant of any conventional wisdom. One item of conventional wisdom, however, has emerged regarding the role of contracts in digital commerce: contracting will be ubiquitous.⁷ This assessment reflects somewhat the notion conveyed in Grant Gilmore's famous little book⁸ regarding the death of property, regulation, and taxation. Gone, all of them; all replaced by contract.

One might be tempted to dismiss this view as the ranting of overcaffeinated Generation Xers, or a typical first approximation political theory from an elite cadre of technically trained pioneers.⁹ Yet there is more to it than that. Unlike other contexts, where the contract form may be inappropriate, the use of contracts in cyberspace seems natural. The on-line medium is textual, and affirmative steps are already required to "surf" web sites or to access information. This environment is conducive to reading, contemplating and responding to message screens that contain a variety of terms and conditions. If a user elects to "click here to accept," the user continues to the next screen.¹⁰

The premise that property rights will become irrelevant in cyberspace stems from this ease of contracting. Property rights will become irrelevant in the on-line environment because every transaction can and will be mediated by a contract. Because the contract form allows parties greater flexibility in tailoring the terms and conditions of an agreement, its use will render the more static property category obsolete. In fact, significant pieces of information are already transferred strictly by contract, without the aid of background property rights.¹¹

Id. at 70 (quoting Jessica Litman, After Feist, 17 U. DAYTON L. REV. 607, 611 (1992)).

8. GRANT GILMORE, THE DEATH OF CONTRACT (1974).

9. Libertarianism was certainly no stranger to the Silicon Valley of fifteen years ago, either.

^{7.} See, e.g., J.H. Reichman & Pamela Samuelson, Intellectual Property Rights in Data?, 50 VAND. L. REV. 51, 70 (1997) (describing this view, and citing sources critical of it):

By restricting access to identifiable online subscribers, for example, and by "placing conditions on access and [using technology] to monitor . . . customer usage," the publisher can largely restore the power of the two-party contractual deal that the advent of the printing press had appeared to destroy. In effect, publishers in this position may not need copyright law at all, even if they qualify for protection.

^{10.} See Diana J.P. McKenzie, Commerce on the Net: Surfing Through Cyberspace Without Getting Wet, 14 J. MARSHALL J. COMPUTER & INFO. L. 247, 254 (1996) ("[O]n-line contracting is moving toward a system where users simply log on, point, and click—and a contract is formed.").

^{11.} Genetic information, for example, is available by contract. *Cf. Face Value: Genes* and T-Shirts—Selling Information Rather Than Drugs is the Key to Making Swift Profits in Biotechnology, THE ECONOMIST, Jan. 4, 1997. Contract is the only option since fragmentary gene data is generally not patentable. See Rebecca S. Eisenberg & Robert P. Merges, Opinion Letter as to the Patentability of Certain Inventions Associated with the Identification of Partial cDNA Sequences, 23 AM INTELL. PROP. L. ASS'N Q.J. 1 (1995).

One crucial assumption informs this view of the future: under ideal circumstances, contracts afford parties everything property rights do and more. Stated another way, property rights are viewed as creating a predetermined, "off-the-shelf" legal relationship, while contracts are presumed to be highly flexible and adaptable. Contracting parties are free to specify the contract's subject matter, the parties' respective rights and duties, the termination events, and (to some extent) the remedies.

A. The Problem of Privity

Contracting involves one potential problem: it is a relationship premised on voluntary consent. Although what may constitute consent changes over time,¹² one element is still required. Parties must be in privity with each other for a contract to be formed. This privity requirement makes contracting in cyberspace problematic.

Clearly, two parties can, if they wish, enter into a contract in cyberspace. The flexible apparatus of offer and acceptance undoubtedly incorporates this form of deal-making. For contractual duties to remain enforceable, however, privity must exist between an original contracting party and each successive transferee along the chain of possession. Putting aside the special cases of intended third party beneficiaries¹³ and defective product warranties, in order for some party (*A*) to sue another party (*C*) for breach of contract, *A* and *C* must have entered into an agreement at some point. If *C* buys an asset from *B* (who contracted with *A*) and does something to harm *A*, *A*'s cause of action normally is against *B*, not *C*.

Party *A* may try to protect itself from this risk in the original contract with *B* by, for examples, imposing restrictions on subsequent transfers, through indemnification, or by protecting itself against liability for third party (*C*'s) actions. Each of these examples, however, is dependent on *B*'s ability to adhere to its promises vis-à-vis third party activity. If several *Bs* exist, one could be insolvent, another unreachable in jurisdictions open to *A*, or the like. Under contract law, *C* is unreachable, except through *B*.

Given the speed at which information (and associated contractual obligations) changes hands in cyberspace, the chain of possession in a typical case could be much longer than A, B, C. If other parties are

13. See infra note 14.

^{12.} See, e.g., Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997) (enforcing warranty included inside box containing computer bought by plaintiff); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (terms inside a box of software bind consumers who use the software after an opportunity to read the terms and to reject them by returning the product); cf. Carnival Cruise Lines, Inc. v. Shute, 499 U.S. 585 (1991) (enforcing a forum election clause that was included among three pages of terms attached to a cruise ship ticket).

involved—say, D through I—the aforementioned problem becomes even more intricate. Just one weak link in the chain can leave A in the lurch. Generally speaking, all parties entering the picture after the weak link will be off the hook. The attendant risks to A are obvious.

Β. **Overcoming A Break in the Chain of Privity**

Might the law develop a policy to deal with breaks in the chain of privity? It would not be the first time. The privity requirement has been alleviated or eliminated in other fields.¹⁴ Why not in cyberspace?

Dispensing with the privity requirement could make sense for two reasons. The first is related to quasi-contracts: if everyone expects digital content to be transferred with conditions on use, anyone who receives information without any contractual restrictions might be obligated to investigate the matter more carefully. Perhaps the recipient of information could check the original source or spot clues from the material's author or original compiler. The law of cyberspace might evolve into a regime of restitution writ large, where no one expects to receive a benefit of commercial advantage for free.¹⁵

The second plausible reason to dispense with the privity requirement would be simple pragmatism. Authors of digital works might need "super-contractual" means of protection to earn a fair reward. Extending the contract form might be deemed essential to protecting the investment in digital content.

A move in this direction, whether based on these policies or others, would not be unprecedented. For example, the law of warranties has been heading in this direction for some time.¹⁶ Contract doctrine is, after all, continually updated, most recently to take account of transactions where contract terms are presented only after a consumer makes a purchase. Why not stretch privity for the benefit of digital commerce?

The answer essentially lies in the difference between stretching and breaking. Contract law has always resisted efforts to do away with the

^{14.} See, e.g., William K. Jones, Economic Losses Caused By Construction Deficiencies: Competing Regimes of Contract and Tort, 59 U. CIN. L. REV. 1051 (1991). Indeed, William Prosser authored a widely cited article on "The Fall of the Citadel," celebrating the end of the privity requirement in products liability cases. See William L. Prosser, The Fall of the Citadel, 50 MINN. L. REV. 791 (1966). I do not include third-party beneficiary contracts in this discussion (1) the second terms of the provide the second secon this discussion because (1) they are an anomaly even in the common law tradition, and (2) the requirement that third parties must be intentional beneficiaries of a contract amounts to a sort of quasi-privity in any event. *See* VERNON V. PALMER, THE PATHS TO PRIVITY: THE HISTORY OF THIRD PARTY BENEFICIARY CONTRACTS AT ENGLISH LAW (1992).

^{15.} On the general notion that much of intellectual property law can be derived from simple notions of restitution, see Wendy J. Gordon, On Owning Information: Intellectual Property and the Restitutionary Impulse, 78 VA. L. REV. 149, 156-57 (1992). 16. See Richard E. Speidel, Warranty Theory, Economic Loss, and the Privity Requirement: Once More into the Void, 67 B.U.L. REV. 9 (1987).

privity requirement entirely. Areas which have already abolished privity requirements, most notably warranties under the Uniform Commercial Code (UCC), are properly considered exceptional.¹⁷ This reluctance is perfectly understandable when an obligation is based squarely on a party's consent. Indeed, the few categories of quasi-contract obligation not based on consent—restitution, for example—have always had a restless, Procrustean feel in the basic course on Contracts. Pushing contract law in that direction when it seems unwilling to do so makes little sense in this case.

Besides, as mentioned earlier, our legal system already has a well developed category of obligation to govern relations between parties not in privity, called "property." Any contractual scheme that sufficiently binds non-parties would, in essence, become some sort of property right. With all deference to the notion of social construction of legal categories, why not call it that?

C. The Property-Contract Interface

Traditionally, to gain the advantages of a state-backed property right, some of the advantages offered by a regime of free contract must be sacrificed. Some agreements possible under the latter system will be unenforceable under the former. I call this a property-contract "tradeoff." In intellectual property, for example, a party could lose some degree of contractual freedom when it abandons a trade secret in favor of a copyright or patent. Consider further the requirements to convert a bilateral agreement between adjoining landowners into a covenant running with the land. Because the restraint on alienation doctrine represents one of the rare common law doctrines whose function is to police the contract-property boundary, it is worth examining.

1. THE PROHIBITION AGAINST RESTRAINTS ON ALIENATION

Restraints on alienation are largely considered undesirable. We are taught as much in law school Property courses. First year Contracts courses, on the other hand, involve agreements to restrain the posttransaction behavior of the contracting parties. The difference is that a

^{17.} The usual warranty case where lack of privity is ignored involves a manufacturer, a distributor, and a consumer. Traditionally, the consumer cannot sue the manufacturer for breach of warranty due to lack of privity. Numerous cases have set aside contract law's privity requirement under these circumstances. *See generally* Speidel, *supra* note 15, at 9. The rationale is straightforward: consumers are the intended beneficiary of a product warranty (distributors usually don't use the product themselves), and they expect a warranty to be binding. Ignoring privity thus comports with the expectations of the parties.

bilateral agreement applies only between contracting parties, whereas a restraint on alienation "runs with the property," and hence interferes with all potential future parties as well.

The frequently voiced rationale for the prohibition of restraints on alienation centers on the need to keep markets functioning smoothly.¹⁸ If the system allows too many bundles of rights that have been modified in idiosyncratic ways, both the speed and certainty of exchange will be diminished. The basic idea is that well functioning markets for land require fairly standardized bundles of rights to work efficiently.

Richard Epstein has argued that this rationale is weak even in markets for real property.¹⁹ The recording of servitudes and easements, according to Epstein, will take care of any third party notice problems, and thus freedom of contract should prevail.²⁰

If a lack of market fluidity is the main objection to customized property rights, Epstein's argument applies with even greater force in cyberspace. While the efficacy of third-party notice in markets for real property interests is debatable, cyberspace seems entirely different. Unlike an easement (or servitude), evidence of which does not normally appear on the face of the land, digital content is quite capable of providing notice concerning the ownership rights retained by its creator or other parties. As we saw earlier, the technology already exists to embed such information directly into digital content. Less ambitious devices can also be employed, such as an embedded pointer that refers users to the creator or a central source of ownership information and use restrictions. Even where such information has been stripped out-such as after a break in the chain of privity, alluded to earlier-the law might create a duty to investigate the ownership status of disembodied information that one comes across. For all these reasons, allowing use restrictions on digital content does not appear to threaten severely fluid markets for

^{18.} For example, if use restrictions affect marketability of property by unreasonably limiting the class of persons to whom the property may be transferred, such restrictions have been held invalid as unreasonable restraints upon alienation. Falls City v. Missouri Pac. R.R. Co., 453 F.2d 771 (8th Cir. 1971); Grossman v. Hill, 122 A.2d 69 (Pa. 1956), *overruled in* Central Delaware County Authority v. Greyhound Corp., 563 A.2d 139 (Pa.Super.Ct. 1989), *rev'd*, 588 A.2d 485 (Pa. 1991).

^{19.} Richard A. Epstein, Notice and Freedom of Contract in the Law of Servitudes, 55 S. CAL. L. REV. 1353, (1982).

^{20.} See id. at 1354, 1358 ("[U]nder a unified theory of servitudes, the only need for public regulation, either judicial or legislative, is to provide notice by recordation of the interests privately created My thesis is simple: With notice secured by recordation, freedom of contract should control."). But see Susan F. French, Toward a Modern Law of Servitudes: Reviewing the Ancient Strands, 55 S. CAL. L. REV. 1261, 1281-1304 (1982); Uriel Reichman, Toward a Unified Concept of Servitudes, 55 S. CAL. L. REV. 1177, 1186-1211 (1982).

digital content.²¹ In other words, under the traditional policy, wideranging restraints on alienation might be permissible.

On the other hand, some interesting theory from Professor Margaret Radin points in the other direction. Professor Radin defends the traditional common-law rule in the face of Epstein's critique:

Assuming that it is efficient to maintain a market with a large scope forever (the long run), then it is efficient to impose enough restraints now to prevent grantors from tying up resources for the future in ways that seriously reduce the scope of the free market. And it seems prima facie cost-effective to disallow endless proliferation of different bundles of sticks which would cause a great amount of uncertainty and transaction costs²²

Radin illustrates the general point with an example, one that may prove telling for our digital future. If all capital assets are entailed or otherwise nontransferable, holders of complementary assets—labor, for example—will be frustrated in their efforts to extract value from those assets.²³ Similarly, many assets in the digital economy will conceivably become so encumbered that potential value-adding future users will be frustrated.²⁴ In the alternative, Professor Radin's work demonstrates that common law doctrine (including the prohibition on restraints on alienation) is available for casting into a new yet familiar role in the digital economy.

2. OTHER LIMITS TO CONTRACT

Thus, if market fluidity is the prevailing concern, and restraints on alienation the only relevant legal principle,²⁵ open-ended contracting

22. MARGARET JANE RADIN, REINTERPRETING PROPERTY 114 (1993).

23. Id. at 115.

24. This frustration may suggest an occasion to apply a renewed fair use doctrine. See generally infra part III.

^{21.} This statement is a generalization. Where the creator of a work merely requires compensation when someone uses the work, and where the compensation mechanism is built into the content, additional transaction costs are minimized. Assuming the new use makes economic sense after paying the required compensation, the condition on reuse will not substantially impede the market for the work. In some cases, however, restrictions on use may not be so simple. Where, for example, the creator of a digital work attaches a condition that subsequent users must seek his or her permission before reuse is permitted, transaction costs increase, since such a restriction creates additional bargaining and negotiation costs.

^{25.} Actually, there is one legal principle in intellectual property law that appears to embody the policy against restraints on alienation: the so-called "first sale" rule. Under this rule, which has been codified for copyright (*see* 17 U.S.C § 109) but not patent law, the owner of intellectual property rights may not restrict a buyer's post-sales activity along a number of dimensions, most importantly with respect to resale prices or restrictions on the class of subsequent purchasers. This is not the place for a full-scale explication of "first sale" doctrine. For present purposes it is enough to note that few "first sale" cases are concerned with market fluidity. These cases are centered primarily on extensions of rightholders' power "beyond" that conferred by the property right, and the notion that it would be unfair for rightholders to receive compensation beyond the initial transaction. *Cf.* Neel Chatterjee, *Imperishable Intellectual Creations: The Limits of the First Sale Doctrine*, 5

makes the most sense in cyberspace. Before accepting this conclusion, however, we must examine two intellectual property doctrines that limit contractual freedom for reasons other than market fluidity. These are (1) misuse, which limits the ability to extend a property right along several dimensions, and (2) federal preemption, which limits state law analogues to federal property rights in the interest of uniformity. In this brief overview, I draw on these doctrines to construct a list of immutable attributes that are not traditionally alterable by contract.

Misuse is a concept best explained in this context as an effort to contain externalities from contracting.²⁶ Misuse is similar to other doctrines, such as the common law rule against unreasonable restraints on In the prototypical misuse case, the holder of a federal trade.²⁷ intellectual property right extracts an agreement with a licensee to recognize the right for a term that exceeds the statutory term of protection.²⁸ This type of agreement has been consistently prohibited, on

26. See ROBERT P. MERGES, PATENT LAW AND POLICY (2d ed. 1997), at Chapter 11.

27. Indeed, like misuse, the law against unreasonable restraints on trade emerged before federal antitrust law and persists alongside it in a sometimes uncomfortable tandem arrangement.

28. See, e.g., Brulotte v. Thys Co., 379 U.S. 29 (1964). See also MERGES, supra note 26, at 116:

The question in the case of private patent term extensions (beyond 17 years)... is whether parties "external to the contract" need to be protected. In general, it would seem to depend on a number of factors: (1) the market power of the licensor; (2) the strategic significance of the patented item; (3) the identity of the licensee; and (4) the overall structure of the industry, among others.

One can imagine scenarios where these factors suggest the need for a mandatory (or immutable) rule. Consider the case where a licensor controls a key technology in an industry dominated by it and a licensee, and the two agree on a private patent term extension. Unlicensed competitors could avoid the effects of the licensor-licensee private extension simply by remaining unlicensed. This might put them to a difficult choice (at the margin)—take a license and stay alive (though burdened with royalty obligations for more than 17 years), or try to survive and prosper in the post-expiration period. NB: This analysis assumes they will not be able to invent cost-effectively around the patent for at analysis assumes they will not be able to invent cost-effectively around the patent for at least as long as the extended term lasts; it also assumes unrealistic discount rates, insofar as the present value of the post-expiration period is quite low whether the patent term is extended or not. In some circumstances, this might be too harsh a choice to place on licensees. *See generally* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 221 (1988) (reciting the standard Cournot model, where monopolist has incentive to contract with potential entrant, rather than co-exist as duopolists; implies possibility of using licensing as opportunity for monopoly-splitting agreement).

Note that Tirole's discussion applies whether a patent term is extended by contract or not (though presumably the longer the period of monopoly the greater the incentive to play

FORDHAM INTELL PROP. MEDIA & ENT. L.J. 383 (1995). Both rationales are poorly articulated; the latter is especially weak. Most importantly, the rule is not particularly important, since it is easily evaded by simply characterizing a transaction as a license rather than a sale. *See, e.g.* Microsoft Corp. v. Harmony Computers & Elecs., Inc., 846 F. Supp. 208 (E.D.N.Y. 1994); cf. Julie E. Cohen, A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace, 28 CONN. L. REV. 981, 984 n.3 (1996) ("Consistent with the planned extraction of royalties on a per-use basis, copyright owners and developers of copyright management systems refer to the initial transaction in the copyrighted work as a 'license' rather than a sale.").

the grounds that it undermines the incentive/welfare loss balance struck by Congress.²⁹ A similar line of cases concerns tie-ins, which in this context are characterized as contractual efforts to extend the scope of the federal property right-or, to use the now-controversial phrase, to "leverage" that right.³⁰

Preemption law bears some similarities to misuse, though it has only recently been discussed with respect to bilateral contracting. Traditionally, in cases ranging from *Sears*, *Roebuck & Co. v. Stiffel Co.*³¹ and Compco Corp. v. Day-Brite Lighting, Inc.³² in 1964 to Bonito Boats, Inc. v. Thundercraft Boats in 1989,³³ the United States Supreme Court has addressed the validity of state intellectual property laws in terms of statutory preemption, questioning whether the state law conflicts with the federal scheme of patent and copyright statutes enacted by Congress.³⁴ The Court has often concluded that state statutes aimed at protecting an aspect of intellectual property are in fact preempted by the federal scheme of protection.35

This principle has recently been applied to bilateral contracts. One commentator has argued that federal law should preempt contractual restrictions on "reverse engineering," which some courts have found to qualify for the "fair use" defense under copyright law.³⁶ A wide-ranging debate on the matter is under way. An important focal point of the discussion is the need to preserve copyright's "fair use" defense in the

29. See, e.g., Merges, supra note 26, at Chapter 1.

30. See generally Louis Kaplow, The Patent-Antitrust Intersection: A Reappraisal, 97 HARV. L. REV. 1813 (1984).

31. 376 U.S. 225 (1964).

32. 376 U.S. 234 (1964).

33. 489 U.S. 141 (1989).

33. 489 U.S. 141 (1969). 34. Preemption has been located at various times in copyright and patent law in a statute (see 17 U.S.C. § 301 (Supp. 1991) (copyright preemption)) and in the United States Constitution (see Bonito Boats, 489 U.S. 141). 35. See Bonito Boats, 489 U.S. 141; Sears, 376 U.S. 225; Compco, 376 U.S. 234. 36. David A. Rice, Public Goods, Private Contract, and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering, 53 U. PITT. L. REV. 543 (1995)

(1992).

(1992). Under United States copyright law, infringers escape liability if their activities constitute "fair use." Fair use has been described as an "equitable rule of reason, as it must be flexible in order to allow judges, on a case-by-case basis, to make individual determinations of the copyright balance." Meeropol v. Nizer, 560 F.2d 1061, 1068 (2d Cir. 1977). For a history of the fair use doctrine, see WILLIAM F. PATRY, THE FAIR USE PRIVILEGE IN COPYRIGHT LAW 6-17 (1985). Congress codified the fair use doctrine and outlined four factors for fair use. 17 U.S.C. § 107 (1994). These four factors are: (1) the purpose and character of the use, including whether such use is of commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. *See id*.

the split-the-monopoly game). On the other hand, agreements such as those in *Brulotte* are arguably nothing more than extended payment plans, in which case they look much more benign. See Frank M. Caprio, *The Trouble with* Brulotte: *The Patent Royalty Term and Patent Monopoly Extension*, 1990 UTAH L. REV. 813.

face of contractual restrictions that would undermine it. One side of the discussion looks to the Constitution for support; that is, to the extent that certain aspects of fair use are seen as embodying First Amendment principles (such as in cases preserving the defense for parodies of copyrighted works), neither state legislation nor contract can cut into the scope of fair use.

This is not the place for a full-scale critique of these immutable rules. Instead, I will limit myself to two remarks and a proposal.

The first remark concerns fair use. I argue in another paper that if terms restricting fair use become ubiquitous in licensing agreements in an industry, preemption may apply.³⁷ In other words, a dominant contractual form can operate as a form of "private legislation"³⁸ that restricts federally conferred rights every bit as much as a state statute. However, the ubiquitous contract term must appear in an industry where the licensors have at least some degree of market power, and where licensees can credibly be shown to object to the term.³⁹ For example, if no licensee is well placed to create adaptations of the licensors' product, or if good substitutes to the licensed products are available, it is difficult to see why the sheer ubiquity of an anti-reverse-engineering term is a problem; where market entry is already difficult or unlikely, the prohibition against reverse engineering would be irrelevant.

The second remark concerns extension of property rights, either in time or into related markets. Most cases of temporal extension are relatively benign. If a licensee wants to give up its future right to use information in exchange for the present right to use it, why not permit such action? Unless third parties are harmed, this tradeoff seems reasonable. At any rate, the law should at least entertain the idea. Extension into related markets seems equally acceptable, again with the caveat of no serious third-party effects. The literature and case law on tie-ins is sufficiently well developed to give a fair reading on when such practices will be deleterious.

These two remarks lead to the following proposal. Unless serious third-party harm or constitutional rights are implicated, intellectual property holders should be free to craft contracts as they see fit. Per se rules in this area—or at any rate, the current rules—simply do not make

^{37.} Robert P. Merges, Intellectual Property and the Costs of Commercial Exchange: A Review Essay, 93 MICH. L. REV. 1570 (1995).

^{38.} The term is, of course, Kessler's. See Friedrich Kessler, Contracts of Adhesion— Some Thoughts About Freedom of Contract, 43 COLUM. L. REV. 629 (1943) (defining notion of "private legislation" in context of adhesion contracts).

^{39.} See Maureen O'Rourke, Drawing the Boundary Between Copyright and Contract: Copyright Preemption of Software License Terms, 45 DUKE L.J. 479, 557 (1995) (stating that copyright preempts contract only where the contract environment gives the seller monopoly power).

much sense. While this is true for all intellectual property to some extent, it seems doubly so for rights in digital content. The low transaction costs in this market make search and negotiation quite easy, which means an alternative source for a given piece of content will almost always exist, thus reducing the chance that a party will have to accept onerous terms.

3. STRUCTURING PROPERTY RIGHTS TO MAKE CONTRACTING EASIER

Contract and property can thus coexist comfortably in cyberspace with very few exceptions. In fact, property rights can be structured to make contracting easier in a variety of ways. For example, the muchmaligned National Information Infrastructure Report recommends legislation to encourage use of embedded copyright ownership and management information, to accompany digital content wherever it goes.⁴⁰ This proposal calls for a variety of punishments for people who strip away this information from content. This protection would obviously be a great help to the systems of self-reporting content described in the Introduction to this essay; it would create confidence in the power of information (including self-executing contract terms) embedded in content. Among other things, it creates an additional remedy against someone who breaks the chain of privity between content creator and subsequent users.

From the perspective of transaction costs, it is difficult to criticize policies aimed at encouraging use of copyright management information.⁴¹

41. Legitimate privacy concerns and the like may, however, arise in the details of particular proposed systems. One might argue in this connection that a default rule should compensate victims of informational misuse, such as those who are reported against their wishes as readers of certain information or visitors to certain sites. At a minimum, this type of rule would require that anyone who does record such information about the users of information or visitors to a site must report that fact to users and visitors, and in effect

^{40.} The National Information Infrastructure Copyright Protection Act, S. 1284 & H.R. 2441, 104th Cong., 2d Sess. (1995) [hereinafter NIICPA], introduced in both houses of Congress in September 1995, draws on the "White Paper" issued by the Clinton Administration's Information Infrastructure Task Force. *See* U.S. DEP'T OF COMMERCE, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS 10-12, 177-78, 230 (1995) [hereinafter WHITE PAPER]. Section 4 of the NIICPA, titled "Copyright Protection and Management Systems," would establish comprehensive protection for copyright owners' decisions regarding copyright management in cyberspace. *See generally* Pamela Samuelson, *Intellectual Property Rights and the Global Information Economy*, 39 COMM. OF THE ACM 23 (1996); Julie E. Cohen, *Some Reflections On Copyright Management Systems and Laws Designed to Protect Them*, 12 BERKELEY TECH. L.J. 161 (1997). Under the NIICPA, Section 1201 of the Copyright Act would prohibit the importation, manufacture, or distribution of devices or services "the primary purpose or effect of which is to avoid, bypass, remove, deactivate, or otherwise circumvent... any process, treatment, mechanism or system which prevents or inhibits the violation of any of the exclusive rights of the copyright owner. 41. Legitimate privacy concerns and the like may, however, arise in the details of

Indeed, I have recently argued elsewhere that post-grant recontracting should be taken into account when entitlements are being designed.⁴² Such information will help potential licensors and licensees identify each other, and might also contain some bare-bones terms of agreement. After all, information about ownership generally facilitates market-making. And where information about the terms of use and compensation is added, these systems raise the tantalizing prospect of almost negligible transaction costs. They are, in a sense, the ultimate in Newtonian law-making. Even so, my earlier comments should make clear that no punishment reasonably likely to be enacted will deter everyone from stripping away ownership and/or contracting information. Hence, I believe the off-the-shelf property rights regime will continue to be important.

Amidst this clear trend toward market facilitation in intellectual property law, one recent development stands out. In conjunction with its adherence to the international copyright treaty known as the Berne Convention, the United States substantially weakened the incentive for all copyright holders to register their copyrights. This development is unfortunate. Just at the moment when electronic databases make such registered information highly useful, we have moved away from universal registration. For the same reasons that real property recording systems are considered efficient, we should reconsider this policy.⁴³ One approach might be to increase incentives to register, possibly by decreasing liability when infringement involves material unregistered on a centralized electronic copyright database.

D. Digression on Informal Restrictions in Cyberspace

Thus far, we have discussed property and contract. Property, I have argued, is distinctive because it allows enforcement against third parties not in privity with the rightholder. Creators can then use contracts to craft individualized restrictions on use in bilateral relations built on property rights. In this section, I briefly consider a third regime: informal (i.e., not legally enforceable) restrictions on digital content. This is currently, and will likely continue to be, an important source of norm-based rights in the on-line world.

ask them to waive their right to compensation. This would have the familiar "informationforcing" effect of the Ayres-Gertner default rule model.

^{42.} See Robert P. Merges, Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations, 84 CAL. L. REV. 1293 (1996).

^{43.} See Joseph T Janczyk, An Economic Analysis of the Land Title System for Transferring Real Property, 6 J. Leg. Stud. 213 (1977); cf. RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 79 (4th ed. 1992) ("It would improve efficiency to institute a system of paper water titles analogous to the systems used to record land titles.").

Property is a recent introduction into cyberspace. In the beginning, and still in many communities, the prevailing norm was free exchange.44 This freedom of exchange is a manifestation of the prevailing norm from the early days of software.45 One prominent organization, the Free Software Foundation, promotes this norm today through the institution of "copyleft," a copyright license that requires transferees of free software to promise not to incorporate it in a commercial product and to pass it on, even if embedded in a larger program, to others free of use restrictions.46

By its own terms, the copyleft agreement is an unusual license; at the most basic level consider the problem of determining damages when the licensee frustrates the licensor's expectation of zero profits under the contract. But what is most significant about the agreement is that it purports to restrict subsequent transferees who receive software from a licensee, presumably even if the licensee fails to attach a copy of the agreement. As this new transferee is not in privity with the original copyleft licensor, the stipulation seems unenforceable.

Even so, copyleft no doubt carries some moral force in the on-line community. It therefore serves as an example of a non-binding, informal norm in cyberspace. The copyleft license in this community is the equivalent of a statement of good practices. Surely some programmers dutifully pass along the license and police cases where subsequent transferees receive code without such a license. In short, the notice is aimed at the perpetuation and enforcement of a norm that holds some force in this community, and it is therefore worth mentioning in a catalogue of rights in digital content.47

Summary: A Three-Tiered Regime. E.

In summary, a three-tiered information-protection regime exists in cyberspace comprised of property rights, contracts (many, but by no means all, involving property rights), and informal restrictions. The following chart (Table 1) briefly lists major costs and benefits for each.

^{44.} See Margaret Jane Radin, Regulation of Computing and Information Technology: Property Evolving in Cyberspace, 15 J.L. & COM. 509 (1996).

^{45.} Indeed, the ongoing debate over software patents—pitting purist programmers against bottom-line-oriented business types—has many earmarks of a clash of cultures.
46. The copyleft agreement, or "General Public License," is available at http://www.gnu.ai.mit.edu/copyleft/gpl.html> (visited May 2, 1997).

^{47.} Many other communities operate with similar norms. Consider the accepted practice in academia of marking a draft research paper with the notice "Do Not Cite or Quote Without Permission of Author." Unless such a notice creates a unilateral contract—accepted when the other party reads the paper, perhaps—it is unlikely to be enforceable. Yet breach of the informal norm is considered a serious infraction in the academic community. Informal restrictions thus have some force in many realms, and cyberspace is surely one.

	Benefits	Costs
Formal Property Rights	Maximum enforceability (no privity required)	Limited term; lack of flexibility
Enforceable Contracts	More flexible, adaptable	Limits on enforceability (privity requirement, possibility of preemption)
Non-binding Preferences	Totally flexible	Cannot be legally enforced

Table 1.

III. FAIR USE: THE END OF THE "MARKET FAILURE" RATIONALE?

Digital networks call into question the assumptions that animate an important body of copyright law. In this section, I argue that because the contemporary fair use doctrine is predicated on a market failure rationale, and because an electronic exchange potentially eliminates this market failure for digital content, fair use law will significant shrink, or an alternative basis for fair use will be rediscovered. I hint at some possibilities along these lines at the end of this section.

The prevailing view of fair use was first spelled out in an influential article by Wendy Gordon.⁴⁸ Gordon described the fair use doctrine in terms of "market failure."⁴⁹ Market failure occurs when the transaction costs of a voluntary transfer are so high⁵⁰ that a consensual transfer is unlikely to take place spontaneously.⁵¹ In such a case, the law provides users of copyrighted works with the statutory defense of fair use.

The great strength of Gordon's contribution was that she both rationalized fair use law and provided sensible limits to its application. As recent cases show, however, the market failure rationale left a few questions unanswered. These questions—which center on the likelihood of market formation—are the same ones raised by the new digital networks.

Gordon's key insight was that fair use makes sense where no functioning market for copyrighted works exists.⁵² She did not dwell on a corollary issue, however: the likelihood of market development. In other words, how permanent was the market failure? Where market

^{48.} Wendy Gordon, Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors, 82 COLUM. L. REV. 1600 (1982).

^{49.} Id. at 1614-15.

^{50.} See id. at 1628-30.

^{51.} See id. at 1614-15.

^{52.} In all fairness, a re-reading of Gordon's article makes quite clear that this was only *one* of her chief insights. She also commented on the appropriateness of fair use as a vehicle to favor explicitly certain uses—an altogether distinct rationale, which I take up later.

development is unlikely, the fair use doctrine should be applied. But where a market could develop if copyrights are enforced, the absence of an initial market should not automatically lead to the implementation of the fair use defense. Indeed, finding fair use would be self-defeating in such a case; the market that might otherwise have been formed would be killed.

This line of thinking leads inevitably to a parallel consideration. If we are unsure whether a market for a certain use of copyrighted works will develop, why not fully enforce the rights and see whether the market follows? At the very least, we should grant the firms and individuals in the field an opportunity to explore the creation of a market mechanism. If, after some reasonable period of time, no potential market takes shape, then perhaps fair use is in order. I have made a very similar argument elsewhere, in stating a case against compulsory licensing in intellectual property law.⁵³

The dominance of Gordon's market-failure principle is apparent from two recent cases. Both question the legality of copying scholarly works for inclusion in university course packets. In the first case, *American Geophysical Union v. Texaco, Inc.*,⁵⁴ the Second Circuit declined to uphold a fair use defense in favor of corporate photocopiers of plaintiff's scientific publications. Pointing specifically to the Copyright Clearance Center (CCC), an institution organized as a clearinghouse for photocopying royalties, the court emphasized that the existence of a market-making institution militated against a fair use finding:

Though the publishers still have not established a conventional market for the direct sale and distribution of individual articles, they have created, primarily through the CCC, a workable market for institutional users to obtain licenses for the right to produce their own copies of individual articles via photocopying. The District Court found that many major corporations now subscribe to the CCC systems for photocopying licenses... Indeed, it appears from the pleadings, especially Texaco's counterclaim, that Texaco itself has been paying royalties to the CCC.... Since the Copyright Act explicitly provides that copyright holders have the "exclusive rights" to "reproduce" and "distribute copies" of their works, see 17 U.S.C. § 106(1) & (3), and since there currently exists a viable market for licensing these rights for individual journal articles, it is appropriate that potential licensing revenues for photocopying be considered in a fair use analysis.

Despite Texaco's claims to the contrary, it is not unsound to conclude that the right to seek payment for a particular use tends to become legally cognizable under the fourth fair use factor when the means for paying for such a use is made easier. This notion is not

- 53. See generally Merges, supra note 37.
- 54. 60 F.3d 913 (2d Cir. 1994).

inherently troubling: it is sensible that a particular unauthorized use should be considered "more fair" when there is no ready market or means to pay for the use, while such an unauthorized use should be considered "less fair" when there is a ready market or means to pay for the use. The vice of circular reasoning arises only if the availability of payment is conclusive against fair use. Whatever the situation may have been previously, before the development of a market for institutional users to obtain licenses to photocopy articles, . . . it is now appropriate to consider the loss of licensing revenues in evaluating "the effect of the use upon the potential market for or value of" journal articles.⁵⁵

Another recent case echoed the same theme. In an en banc decision reversing a prior finding of fair use, the Sixth Circuit emphasized the importance of the nascent institutional transactional apparatus for course packets in finding no fair use:

Where, on the other hand, the copyright holder clearly does have an interest in exploiting a licensing market—and especially where the copyright holder has actually succeeded in doing so—"it is appropriate that potential licensing revenues for photocopying be considered in a fair use analysis." *American Geophysical*, 60 F.3d at 930. Only "traditional, reasonable, or likely to be developed markets" are to be considered in this connection, and even the availability of an existing system for collecting licensing fees will not be conclusive. *Id.* at 930-31. But Congress has implicitly suggested that licensing fees should be recognized in appropriate cases as part of the potential market for or value of the copyrighted work, and it was primarily because of lost licensing revenue that the Second Circuit agreed with the finding of the district court in *American Geophysical* that "the publishers have demonstrated a substantial harm to the value of their copyrights through [Texaco's] copying." *Id.* at 931.⁵⁶

These recent opinions show that if fair use is strictly dependent on market failure, it is a concept with a very limited future. If the marketmaking capacity of institutions such as the CCC makes such a dent in market failure, digital technologies will obliterate the fair use defense entirely. Put another way, if the fair use defense arises only when transaction costs are prohibitive, the dramatic reduction in those costs will give the defense a very limited role in the future.

For some, this will be cause for celebration. Since fair use represents an end-run around the market, market-centric observers will enjoy its demise. For others, however, fair use is an important foundational concept in the law of copyright. To them, its elimination will mean only that the copyright system has lost sight of its true purpose.

^{55. 60} F.3d at 930-31.

^{56.} Princeton Univ. Press, Inc. v. Michigan Document Serv., Inc., 99 F.3d 1381, 1387 (6th Cir. 1996).

A. The Remnants of a Market Failure Rationale

Where market failure is based on factors other than locating a right holder and proposing a deal, the logic of fair use still makes sense; some varieties of market failure exist beyond the simple case of costly marketmaking.

Two examples in this vein are the market for parodies and the breakdown of bargaining under bilateral monopoly conditions.⁵⁷ In both cases, market exchange fails to occur for reasons other than because buyers and sellers cannot cost-effectively find each other. Indeed, to call these instances of market failure may seem a stretch, since the real problem is that the parties simply fail to agree. But the failure to agree occurs for reasons that a rational party would not entertain. A parodist willing to pay reasonable compensation may be turned away, or bargaining between bilateral monopolists might break down for strategic reasons, such as disagreement over the splitting of a sizable surplus.

Of course, in both instances a judge would have to be fairly presumptuous to conclude that the parties have failed to agree to an exchange for the "wrong" reasons. Ultimately, what would justify such a conclusion is the harm that befalls third parties from a lack of agreement. In the case of a stillborn parody, the stock of social commentary is For bargaining breakdown, society loses out (at least depleted. temporarily) on a socially useful composite product requiring the integration of independently owned property rights. From these instances, we can glean the workings of an important policy: a well functioning market serves important social goals. We all benefit from the robust pattern of private transfers in the intellectual property market. Public benefit is such an important consideration, in fact, that when markets fail for reasons unrelated to "legitimate" reservation prices, the law will coerce a transfer. A voluntary bilateral exchange, in other words, is important-but exchange itself (which might better be called dissemination) is more important still.

B. Towards A New (Old) Conceptual Foundation?

Like many technological advances before it, the digital network revolution offers an opportunity to rethink practices and concepts that have become embedded in conventional technology over time, and hence become invisible. I believe such an occasion is at hand with respect to fair use. In this section, I very briefly sketch a defense of a "new" conceptual

^{57.} See Robert P. Merges, Are You Making Fun of Me? Notes on Market Failure and the Parody Defense in Copyright, 21 AM. INTELL PROP. L. ASS'N Q.J. 305 (1993); Robert P. Merges, Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents, 62 TENN. L. REV. 75 (1994) (focusing on bargaining breakdown in one-shot, as opposed to repeat-play, intellectual property rights transactions).

foundation for the doctrine, in line with my comments on the importance of dissemination. As will become clear, the quotation marks are intentionally ironic; the new foundation is in fact the traditional one, which had merely been obscured by the brilliance of Professor Gordon's reformulation.

Fair use will revolve less around market failure, and more around the idea of favoring certain classes of users with a statutory privilege. In economic terms, the new foundation will represent a shift from emphasizing transaction costs to emphasizing redistribution, pure and simple. Since markets are possible and feasible between all parties in a digital environment, the relevant policy questions will center on when it makes sense to do an "end run" around the market.

C. A Brief Word on Intellectual Property and Subsidies

As a positive matter, various features of intellectual property law especially copyright—can best be explained as an attempt to subsidize creative people. Thus, the Copyright Act allows artists, writers, and others who license copyrighted works to renege on those licenses in midstream. Whether explained as a countermeasure to the weak bargaining position of creators early in their careers, or as outright efforts at ex post fairness, the effect is the same: wealth is redistributed from film studios, publishers, etc.—and ultimately consumers—to the creators of copyrighted works.

Thus, starting from this positive stance, arguing for redistributive underpinnings for fair use is quite defensible. Less clear, and therefore worthy of a momentary diversion, is the normative question: should intellectual property doctrine be used as a redistributive technique?

To engage this important issue fully would bring me farther afield than even I am accustomed to traveling. Instead, I will limit myself to two comments. Both depart from the well known argument in the law and economics literature that redistribution is best served by direct taxes and subsidies, rather than by the structure and application of non-tax-related legal rules.⁵⁸

First, one of the standard arguments against redistribution by legal rules is that it is too random: it takes place only when the legal rule is invoked. This principle is easiest to see in the field of torts, a discipline that has spawned much in-depth analysis of the redistribution issue.⁵⁹ Only when (a) an accident takes place, and (b) a court sets compensation

^{58.} For a good statement of the conventional view, see Louis Kaplow & Steven Shavell, Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income, 23 J. LEGAL STUD. 667 (1994).

^{59.} Id.; see also, e.g., Thomas J. Miceli & Kathleen Segerson, Defining Efficient Care: The Role of Income Redistribution, 24 J. LEGAL STUD. 189 (1995).

(or in the shadow of such compensation) will the legal rule serve its purpose.⁶⁰ This type of legal argument is obviously an unreliable instrument of social policy.

Rules governing intellectual property are clearly different. Rules that favor creators will operate in all cases involving creative works. Indeed, putting aside those close cases that must be litigated, these rules will be applied automatically by the parties involved. The mid-stream termination license in copyright, mentioned above, is an example; it favors all creators whose works are licensed on a long-term basis. Termination is an accepted part of the terrain in licensing practice. Thus, in these areas, the chance events so necessary for tort doctrine to serve its redistributive goal, are simply not a prerequisite to operation of the rule.

A second argument made against redistribution through judicial rules is that it would plunge courts into areas best left to legislatures.⁶¹ Obviously, when a redistributive policy is built into a statutory scheme, this argument evaporates. This is precisely the case with many areas of intellectual property law. When legislating on fair use, for example, Congress very intentionally meant to favor the special needs of certain classes of users. Indeed, the whole history of intellectual property law points toward redistribution as an important policy. While the basic economic theory of intellectual property is most often pitched in terms of allocative efficiency,⁶² a strong redistributive element remains in the law. I see no reason why we should not make this explicit in those cases where it appears to make sense.

Fleshing out the scope of the fair use doctrine is not the purpose of this section. Such an undertaking would be as difficult as determining what is a fair tax rate. Indeed, since fair use can profitably be understood as a tax on copyright holders for the benefit of certain classes of users, the analogy is a close one. Essentially, my point is that in the realm of cyberspace we need to abandon the reasoning of *Texaco* and related cases. Rather than focusing on whether a market might form for the copyrighted work, we should assume it will. The only relevant questions are: (1) which class(es) of users should be allowed to bypass the presumptive market; and (2) how much revenue should the copyright holder be forced to forego to serve the goals of fair use?⁶³

^{60.} See Kaplow & Shavell, supra note 58, at 674-75.

^{61.} See id. at 675.

^{62.} That is, intellectual property rights are required to call forth the optimal amount of investment in products embodying creativity; lower levels of investment yield suboptimal levels of creativity and innovation.

^{63.} Cf. Niva Elkin-Koren, Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace, 14 CARDOZO ARTS & ENT. L.J. 215, 283-94 (1996) (on fair use in copyright).

IV. CONCLUSION

The reference to Newton in the title is meant to invoke the conventional image of a mechanical "clockwork" universe where friction plays no role. This is the image that comes to mind when cyberenthusiasts tout the contractarian basis of exchange in the on-line economy were all sources of transactions costs have been eliminated. This essay contends that the image, while powerful, is incomplete. Bilateral contract will be ubiquitous in cyberspace, but it is unlikely to displace completely state-backed property rights for two reasons. First, breaks in the chain of privity mean that the "safety net" of a property right may still be necessary to protect adequately investment by creators of digital content. Second, certain limits on the rights of intellectual property owners are best seen as immutable, i.e., outside the ability of contracting parties to waive or vary.

While elegant, the Newtonian world came to be seen as incomplete. In the same way, the notion of purely contract-based commerce in cyberspace, while appealing, is too simple to be true. The complexities of enforcement costs and contracting externalities inevitably intrude. Like classical Newtonian mechanics, the world of pure contract must remain only a starting point.