Property, Intellectual Property, and Free Riding

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Intellectual property protection in the United States has always been about generating incentives to create. Thomas Jefferson was of the view that "[i]nventions . . . cannot, in nature, be a subject of property;" for him, the question was whether the benefit of encouraging innovation was "worth to the public the embarrassment of an exclusive patent."[1] On this long-standing view, free competition is the norm. Intellectual property rights are an exception to that norm, and they are granted only when—and only to the extent that—they are necessary to encourage invention. The result has historically been intellectual property rights that are limited in time, limited in scope, and granted only to authors and inventors who met certain minimum requirements. On this view, the proper goal of intellectual property law is to give as little protection as possible consistent with encouraging innovation.

This fundamental principle is under sustained attack. Congress, the courts, and commentators increasingly treat intellectual property not as a limited exception to the principle of market competition, but as a good in and of itself. If some intellectual property is desirable because it encourages innovation, they reason, more is better. The thinking is that creators will not have sufficient incentive to invent unless they are legally entitled to capture the full social value of their inventions. On this view, absolute protection may not be achievable, but it is the goal of the system.

The absolute protection or full-value view draws significant intellectual support from the idea that intellectual property is simply a species of real property rather than a unique form of legal protection designed to deal with

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1. Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), *in* BASIC WRITINGS OF THOMAS JEFFERSON 708, 712–13 (Philip S. Foner ed., 1944), *quoted in* Graham v. John Deere Co., 383 U.S. 1, 8–9 & n.2 (1966). There are other nonutilitarian theories of intellectual property, primarily based on Locke and the natural law tradition, though it is worth noting that Locke himself spent plenty of time on utilitarian rather than desert-based justifications for property. *See, e.g.*, Richard A. Epstein, *The Utilitarian Foundations of Natural Law*, 12 HARV. J.L. & PUB. POL'Y 713, 733–34 (1989); Seana Valentine Shiffrin, *Lockean Arguments for Private Intellectual Property*, *in* NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 138, 152 (Stephen R. Munzer ed., 2001).

public goods problems. Protectionists rely on the economic theory of real property, with its focus on the creation of strong rights in order to prevent congestion and overuse and to internalize externalities. They rely on the law of real property, with its strong right of exclusion. And they rely on the rhetoric of real property, with its condemnation of "free riding" by those who imitate or compete with intellectual property owners. The result is a legal regime for intellectual property that increasingly looks like the law of real property, or more properly an idealized construct of that law, one in which courts seek out and punish virtually any use of an intellectual property right by another.

In this Article, I suggest that the effort to permit inventors to capture the full social value of their invention—and the rhetoric of free riding in intellectual property more generally—are fundamentally misguided. In no other area of the economy do we permit the full internalization of social benefits. Competitive markets work not because producers capture the full social value of their output—they do not, except at the margin—but because they permit producers to make enough money to cover their costs, including a reasonable return on fixed-cost investment. Even real property doesn't give property owners the right to control social value. Various uses of property create uncompensated positive externalities, and we don't see that as a problem or a reason people won't efficiently invest in their property. Analogously, I argue that full internalization of positive externalities is not a proper goal of tangible property rights except in unusual circumstances, for several reasons: (1) there is no need to fully internalize benefits in intellectual property; (2) efforts to capture positive externalities may actually reduce them, leaving everyone worse off; and (3) the effort to capture such externalities invites rent-seeking.

The goal of eliminating free riding, then, is ill-suited to the unique characteristics of intellectual property. Efforts to permit intellectual property owners to fully internalize the benefits of their creativity will inevitably get the balance wrong. Because this goal seems to derive in the minds of many from their conception of property rights, I suggest that treating intellectual property as "just like" real property is a mistake as a practical matter. We are better off with the traditional utilitarian explanation for intellectual property, because it at least attempts to strike an appropriate balance between control by inventors and creators and the baseline norm of competition. If we must fall back on a physical-world analogy for intellectual property protection—and I see no reason why we should—treating intellectual property as a form of government subsidy is more likely to get people to understand the tradeoffs involved than treating it as real property.[2]

2. Tom Bell is the first to draw this analogy, likening copyright specifically to a particular form of government subsidy: welfare. Tom W. Bell, *Authors' Welfare: Copyright as a Statutory Mechanism for Redistributing Rights*, 69 BROOK. L. REV. 229, 231 (2003).

Part I outlines the growth of the real property theory of intellectual property and explains how that theory has influenced courts to focus on free riding and the complete internalization of externalities. Part II explains why attempting to fully internalize the benefits of inventions is not appropriate and indeed is counterproductive. Finally, Part III discusses the alternatives to the free riding model.

I. The Free Riding Model of Intellectual Property[3]

Talking about patents, copyrights, and trademarks as just another species of property is very much in vogue. The rhetoric and economic theory of *real* property are increasingly dominating the discourse and conclusions of the very different world of *intellectual* property. The shift begins with simple rhetoric—talking about intellectual property rights as aspects of a broader system of property. But its implications go far beyond that. The temptation to move from rhetoric to rationale seems almost irresistible. Courts and commentators adopt—explicitly or implicitly—the economic logic of real property in the context of intellectual property cases. They then make a subconscious move, one that the economic theory of property does not justify: they jump from the idea that intellectual property is property to the idea that the IP owner is entitled to capture the full social value of her right. This leads them to an almost obsessive preoccupation with identifying and rooting out that great evil of the modern economic world—free riding.

The idea of propertization begins with a fundamental shift in the terminology of intellectual property law. Indeed, the term "intellectual property" itself may be a driver in this shift. Patent and copyright law have been around in the United States since its origin, but only recently has the term "intellectual property" come into vogue.[4] A quick, unscientific search

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3. Two paragraphs of this Part of the Article are adapted from my earlier work *Romantic Authorship and the Rhetoric of Property*, 75 TEXAS L. REV. 873, 895–96 (1997) [hereinafter Lemley, *Romantic Authorship*], which sought to describe the emergence of the property view of intellectual property.

4. The modern use of the term intellectual property as a common descriptor of the field probably traces to the foundation of the World Intellectual Property Organization (WIPO) by the United Nations. *See* Convention Establishing the World Intellectual Property Organization, July 14, 1967, art. 2(viii), 6 I.L.M. 782, 784 (defining the term "intellectual property" to include "rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields"). Since that time, numerous groups such as the American Patent Law Association and the ABA Section on Patent, Trademark, and Copyright Law have changed their names (to the American Intellectual Property Law Association and the ABA Section on Intellectual Property Law, respectively).

There were uses of the term in the literature well before this time, especially on the Continent. *See, e.g.*, A. NION, DROIT CIVILS DES AUTEURS, ARTISTES ET INVENTEURS (1846) (referring to "proprietc intellectuelle"); Davoll v. Brown, 7 F. Cas. 197, 199 (C.C.D. Mass. 1845) (calling intellectual property "the labors of the mind" and concluding that they were "as much a man's own . . . as what he cultivates, or the flocks he rears"). Copyright was sometimes referred to as literary property and patents as industrial property. These uses do not seem to have reflected a unified property-based approach to the separate doctrines of patent, trademark, and copyright, however.

for the term "intellectual property" in federal court opinions by decade shows an almost exponential growth in the use of the term:

TABLE 1[5]	
Years	*Instances of Term "Intellectual Property" (Percentage of IP Cases Using Term)*
1944–1954	9 (0.3%)
1954–1964	12 (0.3%)
1964–1974	20 (0.4%)
1974–1984	140 (3.2%)
1984–1994	743 (13.0%)
1994–2004	3,211 (37.8%)

Those who pay attention to that sort of thing may find this shift in terminology important, or at least symbolic;[6] certainly, the rise of the "property rights" view of intellectual property seems to coincide with the widespread use of the new phrase.[7] "Intellectual property" is an appealing term for a variety of reasons. It is sexy: practitioners in the field will tell you that their stock at cocktail parties went up immeasurably when they began to tell people they "did intellectual property" rather than that they were "patent lawyers." It promises to unify discrete areas of discipline dealing with exclusive rights in intangible information. And it promises a connection to the rich and venerable legal and academic tradition of property law.

It is this last connection that has proven the most important. As the term "intellectual property" settles over the traditional legal disciplines of

5. Westlaw search in combined "Allfeds" and "Allstates" databases for text references to "intellectual property" conducted on November 19, 2004. The ratio compares the growth of the term intellectual property to the number of cases involving patents, trademarks, copyrights, trade secrets, or the right of publicity during the same period. I am grateful to Eugene Volokh for helping develop a methodology for my admittedly nonscientific study. One shouldn't make too much of the methodology—growth in the number of cases and the growth of organizations and companies with "intellectual property" in their name may explain part of these differences. Still, the differences are fairly dramatic.

6. *See* Bell, *supra* note 2, at 273 (arguing that "rhetoric matters" and that misleading rhetoric can "lead to unfortunate choices, actions, or habits").

7. To be sure, one can find earlier references to the property analogy. *See* MARK ROSE, AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT 90 (1993) (noting that Blackstone, in his *Commentaries*, "identified 'occupation'—the Roman doctrine whereby one might establish an estate by taking possession of unclaimed land—as the ground for the author's right"). Adam Mossoff has even gone so far as to argue that it was endemic in the early years of the field, Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History, 1550–1800*, 52 HASTINGS L.J. 1255, 1257 (2001) (arguing that "English lawyers and jurists drew upon natural-law conceptions of the social contract and the moral significance of labor, and, in this way, the natural-law philosophers shaped much of the initial common-law definition of patent rights"), though his argument puts him at odds with most historical learning on the subject, and with what at least some contemporaries said they were doing.

patents, copyrights, and trademarks and encroaches as well into such neighboring bodies of law as trade secrets, the right of publicity, misappropriation, unfair competition, and idea submissions, courts and scholars increasingly turn to the legal and economic literature of tangible property law to justify—or to modify—the rules of intellectual property. On the academic front, more and more scholars have expressly argued (or worse, assumed) that information *is* property in the traditional sense and that the rules that apply to one category of property ought presumptively to apply to the others as well.[8] In the antitrust field, both advocates and critics of

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8. *See* Frank H. Easterbrook, *Intellectual Property is Still Property*, 13 HARV. J.L. & PUB. POL'Y 108, 112 (1990) (maintaining that a "right to exclude in intellectual property is no different in principle from the right to exclude in physical property"); *see also* Stephen L. Carter, *Does It Matter Whether Intellectual Property is Property?*, 68 CHI.-KENT L. REV. 715 (1993); Kenneth W. Dam, *Some Economic Considerations in the Intellectual Property Protection of Software*, 24 J. LEGAL STUD. 321 (1995); I. Trotter Hardy, *Property in Cyberspace*, 1996 U. CHI. LEGAL F. 217; F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001); Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727 (2000) [hereinafter Kitch, *Elementary and Persistent Errors*]; Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 RES. L. & ECON. 31 (1986) [hereinafter Kitch, *Patents*]; Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977) [hereinafter Kitch, *The Nature and Function of the Patent System*]; David McGowan, *Copyright Nonconsequentialism*, 69 MO. L. REV. 1 (2004); *cf.* Wendy J. Gordon, *An Inquiry Into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343 (1989) (discussing similarities between copyright law and common law property). In other cases, property theorists don't focus on intellectual property, but use intelleetual property examples as part of a broader theory of property. *See* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The* Numerus Clausus *Principle*, 110 YALE L.J. 1, 3–9, 19–20 (2000) (arguing that the principle of *numerus clausus* is virtually omnipresent in many areas of property law, including intellectual property, although recognizing that "it is probably at its weakest in . . . [this] area").

Of the property scholars, Richard Epstein's work is perhaps the most thoughtful. He believes that the characteristics of intellectual property largely but not entirely parallel real property, and he focuses on the distinctions to justify limits on intellectual property law. *See* RICHARD A. EPSTEIN, LIBERTY VERSUS PROPERTY? CRACKS IN THE FOUNDATIONS OF COPYRIGHT LAW 26–27 (U. Chi. L. & Econ., Working Paper No. 204, 2004), *available at* http://www.law.uchicago.edu/Lawecon/workingpapers.html. But Epstein still begins with the baseline assumption—adopted implicitly from the real property model—that *someone* ought to own an invention.

Other scholars have lamented the rise of property rhetoric and its effects, while acknowledging its growing signifieance in the debate. *See, e.g.*, Rochelle Cooper Dreyfuss, *We Are Symbols and Inhabit Symbols, So Should We Be Paying Rent? Deconstructing the Lanham Act and Rights of Publicity*, 20 COLUM.-VLA J.L. & ARTS 123, 140 (1996) (speaking of the "privatization" of words and symbols); Shuhba Ghosh, *Deprivatizing Copyright*, 54 CASE W. RES. L. REV. 387, 389 (2004) ("To conceive of copyright as essentially private property . . . is to ignore the important historical and realist tradition that has envisioned real property as an instrumental construct designed to pursue certain social and political goals."); Lemley, *Romantic Authorship*, *supra* note 3, at 895–903 (concluding that the "propertization" of intellectual property law "is a very bad idea"); Robert P. Merges, *Property Rights Theory and the Commons: The Case of Scientific Research*, 13 SOC. PHIL. & POL. 145, 146–47 (1996) (discussing the "creeping propertization" in the pure sciences); Neil W. Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 314–21 (1996) (tracing the connection to the preeminence of the Chicago School of economic analysis); Kenneth Port, *The Illegitimacy of Trademark Incontestability*, 26 IND. L. REV. 519, 552 (1993) (noting that "courts generally use property rhetoric to describe trademarks" and arguing that this "is quite problematic because there is, in actuality, no property right in the trademark itself"); Arti Kaur Rai, *Evolving*

antitrust enforcement have adopted the maxim that intellectual property is just like any other form of property, though they draw different conclusions from that assumption.[9]

More important, courts too are increasingly making this assumption. The trend is identified and endorsed by Judge Frank Easterbrook, who writes:

> Patents give a right to exclude, just as the law of trespass does with real property. Intellectual property is intangible, but the right to exclude is no different in principle from General Motors' right to exclude Ford from using its assembly line . . . .
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> . . . Old rhetoric about intellectual property equating to monopoly seemed to have vanished [at the Supreme Court], replaced by a recognition that a right to exclude in intellectual property is no different in principle from the right to exclude in physical property. . . .
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> . . . Except in the rarest case, we should treat intellectual and physical property identically in the law—which is where the broader currents are taking us . . . .[10]

Most critically, the Supreme Court has increasingly relied on the rhetoric of property rights in treating intellectual property and related cases.[11]

Scientific Norms and Intellectual Property Rights: A Reply to Kieff, 95 NW. U. L. REV. 707, 710–13 (2001) (discussing propertization in academic science); Pamela Samuelson, *Information as Property: Do* Ruckelshaus *and* Carpenter *Signal a Changing Direction in Intellectual Property Law?*, 38 CATH. U. L. REV. 365, 396–97 (1989) (hoping that "the first amendment's protection of free speech interests will serve as some check on the reach of the information as property doctrine"); *cf.* Dan Hunter, *Cyberspace as a Place and the Tragedy of the Digital Anticommons*, 91 CAL. L. REV. 439 (2003) (noting the effects of analogizing the internet to real property); Mark A. Lemley, *Place and Cyberspace*, 91 CAL. L. REV. 521 (2003) [hereinafter Lemley, *Place*] (same).

One measure of the extent to which the parallel has filtered through the legal academy is that first-year property casebooks now include significant discussions of intellectual property. *See, e.g.*, JOHN P. DWYER & PETER S. MENELL, PROPERTY LAW AND POLICY 502–43 (1998).

9. *Compare* U.S. Dep't of Justice and Fed. Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property § 2.2 (1995) (treating intellectual property just like physical property and interpreting that to mean that it is entitled to no special immunity from antitrust law), *with* Hon. Giles S. Rich, *Are Letters Patent Grants of Monopoly?*, 15 W. NEW ENG. L. REV. 239 (1993) (arguing that since intellectual property is just like physical property, it doesn't confer monopoly power and antitrust scrutiny is inappropriate).

10. Easterbrook, *supra* note 8, at 109, 112, 118.

11. *See, e.g.*, S.F. Arts & Athletics, Inc. v. United States Olympic Comm., 483 U.S. 522, 532 (1987). There, the Court stated:

> [W]hen a word acquires value as the result of organization and the expenditure of labor, skill, and money by an entity, that entity constitutionally may obtain a limited property right in the word. . . .
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> . . . .

This change may inherently affect the way in which people think about intellectual property rights. The rhetoric of "property" itself may carry with it a broader view of rights than other breach of duty cases, as Pam Samuelson has suggested.[12] Blackstone, after all, spoke of property as "that sole and despotic dominion [conferring] total exclusion of the right of any other individual in the universe."[13] Julie Cohen has referred to the tendency of intellectual property owners to assume that their rights are absolute: "a property right [is] delineated as absolute sovereignty over the disposition and use."[14] It has even been suggested that property ownership is hard-wired into our brains.[15] Ask a layperson, or even many lawyers or judges, what it means that something is my property, and the general answer is along the lines of "you own it, so you and only you can use it."

The rise of property rhetoric in intellectual property cases is accordingly closely identified not with common law property rules in general, but with a particular view of property rights as the right to capture or internalize the full social value of property. This view draws analytic strength from a branch of law and economics scholarship that emphasizes the importance of private ownership as the solution to the economic problem known as the "tragedy of the commons."[16] The tragedy of the commons is a specific example of the more general preoccupation of the economic literature on real property with the internalization of externalities and with the use of property law to achieve that end. Externalities are the problem in the tragedy of the commons, and property rights internalize those externalities.[17] In his classic work on the economics of property rights, Harold Demsetz argned that property rights are valuable in a society because they limit the creation of uncompensated

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> . . . The USOC's right to prohibit the use of the word "Olympic" in the promotion of athletic events is at the core of its legitimate property right.

Id. at 532, 541; Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1010–20 (1984) (holding that trade secret laws confer a property right that cannot be "taken" by government disclosure of the secret unless the government pays just compensation). For an analysis of several cases suggesting that the Court may be moving towards a view of information as property, see Samuelson, *supra* note 8, at 375–95.

12. Samuelson, *supra* note 8, at 398.

13. 2 WILLIAM BLACKSTONE, COMMENTARIES *2.

14. Julie E. Cohen, *Overcoming Property: Does Copyright Trump Privacy?*, 2002 U. ILL. J.L. TECH. & POL'Y 375, 379 (2002).

15. *See* BLACKSTONE, *supra* note 13, at *2 ("There is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property."); RICHARD PIPES, PROPERTY AND FREEDOM 65–88 (1999) (stating that animals and all human societies show the possessiveness instinct); F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 36 (2004) (noting that even small children exhibit possessiveness over chattels). It seems reasonably clear, however, that it is physical things, not ideas, in which we have a hardwired possessory instinct.

16. Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1244 (1968).

17. *See* 3 FRIEDRICH A. VON HAYEK, LAW, LEGISLATION AND LIBERTY 43 (1976) (referring to externalities as "neighborhood effects" that land owners will not take into account).

externalities.[18] In a world without transaction costs, Demsetz argued, the creation of a clear property right will internalize the costs and benefits of an activity in the owner and permit the sale of that right to others who may value it more.[19] Once transaction costs are taken into account, Demsetz believed that the creation or alteration of property rights could be explained by asking whether the social gains from internalizing an externality exceeded the costs of doing so.[20] He cites several examples of commons that were converted into property regimes once the problem of overhunting became acute—that is, once the negative externalities associated with hunting grew sufficiently large to justify the transaction costs of creating a property rights regime.[21]

The converse is also true: we regulate what property owners can do with their property where that use is likely to create negative externalities. Regulation of pollution is justified because pollution imposes costs on others;[22] if the effects of pollution were fully internalized by a property owner, there would be much less justification for the imposition of environmental restrictions. Similarly, zoning commissions may regulate the height and use of buildings because of their potential to block neighboring views, generate traffic, or bring undesirable elements to a neighborhood.[23] Absent those externalities, the justification for restricting the property right disappears.[24]

Further support for the externality-reducing function of property law comes from those who apply a strong form of the Coase theorem.[25] If one

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18. Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. PAPERS & PROC. 347, 348 (1967) ("A primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities.").

19. *Id.* at 349.

20. *Id.* at 350 ("[P]roperty rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization."); *accord* Gideon Parchomovsky & Peter Siegelman, *Selling Mayberry: Communities and Individuals in Law and Economics*, 92 CAL. L. REV. 75, 79–80 (2004) (noting that economists identify "high transaction costs as the key barrier to the efficient internalization of externalities such as pollution").

21. Demsetz, *supra* note 18, at 350–53 (discussing the effects of the fur trade on the creation of "private rights in land" by Native Americans in the Labrador Peninsula in Canada and in the southwest and northwest portions of the United States).

22. *See, e.g.*, Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 150 (2004) (explaining that the present environmental regimes attempt to internalize the externalities created by pollution).

23. *See* City of Renton v. Playtime Theatres, 475 U.S. 41, 47–54 (1986) (justifying prohibition of nude dancing based on secondary neighborhood effects).

24. Thus, in *Voyeur Dorm, L.C. v. City of Tampa*, 265 F.3d 1232 (11th Cir. 2001), the court refused to permit a local zoning ordinance prohibiting nude dancing to shut down a live sex show broadcast over the internet from a house in Tampa. The court found that no externalities were imposed on neighbors because the entertainment was not physically provided at the site but sent to remote users. *Id.* at 1236–37.

25. The Coase theorem was originally expressed in R. H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

assumes that efficient transactions will always occur, it doesn't particularly matter *who* gets the property entitlement, as they will simply sell or rent the property to the most productive user.[26] Demsetz acknowledged this too[27] and went on to observe that creating property rights makes it easier to negotiate over the creation of such negative externalities, reducing the need for regulation.[28] Thus, one of the significant risks of assigning property rights—that the property will be mismanaged because it falls into the wrong hands—disappears, at least in theory. This isn't realistic, of course, and Demsetz took transaction costs into account, arguing that property law should internalize externalities up to the point where the transaction costs of doing so exceed the size of the externality.[29]

The externality-reducing theory of property has led courts and scholars to be preoccupied with the problem of "free riding." Indeed, the adoption of the terms "free riding" and "free rider" by the courts shows a significant growth pattern as a percentage of total cases, though not an exponential one.

TABLE 2[30]

Years	*Instances of Term "Free Rid!" (Compared to Common Term)*
1943–1953	72 (19.8%)
1953–1963	129 (24.0%)
1963–1973	150 (21.0%)
1973–1983	402 (44.2%)
1983–1993	634 (59.1%)
1993–2003	657 (52.1%)

If the goal of creating property rights is to equate private and social costs and benefits by having the property owner internalize the social costs

26. *Id.* Coase himself never really believed this; he set up the zero transaction costs model to make a point. But the idea has taken on a life of its own and is generally attributed to him.

27. He noted:

> But the owner of private rights to one parcel does not himself own the rights to the parcel of another private sector. Since he cannot exclude others from their private rights to land, he has no direct incentive (in the absence of negotiations) to economize in the use of his land in a way that takes into account the effects he produces on the land rights of others. If he constructs a dam on his land, he has no direct incentive to take into account the lower water levels produced on his neighbor's land.

Demsetz, *supra* note 18, at 356.

28. *Id.* at 356–57.

29. *Id.* at 350.

30. Westlaw search in "Allfeds" and "Allstates" databases conducted on November 19, 2004. The ratio is to a randomly selected common term—"wrench"—and is designed to capture growth in the number of cases generally. The same disclaimers apply—this doesn't purport to be a scientific study. *See supra* note 5.

and benefits, those who "free ride"—obtain a benefit from someone else's investment—are undermining the goals of the property system. The professed fear is that property owners won't invest sufficient resources in their property if others can free ride on that investment.[31] To be efficient, logic would seem to suggest, we must eliminate free riding.[32]

If one concludes that this logic applies to intellectual property as well, as some (but by no means all) law and economics scholars apparently have,[33]

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31. This argument is commonly found in antitrust law as a justification for intrabrand vertical restraints. *See, e.g.*, Bus. Elec. v. Sharp Elec., 485 U.S. 717, 724–25 (1988) (contending that manufacturers can overcome "the so-called 'free-rider' effect" with price restrictions); RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 295–96 (4th ed. 1992) (explaining that manufacturers can prevent retailers who do not provide presale services from free riding on retailers who do provide such services by "fixing a minimum retail price").

32. My focus in this Article is on economic arguments against free riding. I acknowledge that there are arguments against "unjust" enrichment of another based on theories of desert in intellectual property. *See, e.g.*, Lawrence C. Becker, *Deserving to Own Intellectual Property*, 68 CHI.-KENT L. REV. 609 (1993) (exploring the notion that people who create intellectual property have a stronger claim to ownership of that property than people who create property through nonintellectual labor); Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1544–49 (1993) (arguing for a natural-rights theory of desert as a basis for protecting intellectual property); Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149 (1992) [hereinafter Gordon, *On Owning Information*] (examining the use of restitution doctrines in determining intellectual property rights). Evaluation of those claims must await another day and likely another scholar, though it is worth noting that theories of desert don't do especially well at explaining what the courts actually do in intellectual property, *see* Becker, *supra*, at 609, and that there are also noneconomic arguments *against* intellectual property protection. *See, e.g.*, Wendy J. Gordon, *Render Copyright unto Caesar: On Taking Incentives Seriously*, 71 U. CHI. L. REV. 75 (2004) (arguing that some creativity may be spurred by the idea of "giving back" to a society that has given a gift and that propertization may reduce creation of this sort).

33. The clearest example is Kitch, who suggests a "prospect" rationale for intellectual property that is expressly based on the mining claims system used for certain types of real property once in the public domain. Kitch, *The Nature and Function of the Patent System*, *supra* note 8, at 270–71, 275; *see also* Dam, *supra* note 8, at 323–26 (arguing that strong copyright protection should be applied to software); Kieff, *supra* note 8, at 732–36 (advocating for robust property rules to protect patent holders as a way to avoid "underuse"). Demsetz devoted less than a paragraph to intellectual property. He wrote:

> Consider the problems of copyright and patents. If a new idea is freely appropriable by all, if there exist communal rights to new ideas, incentives for developing such ideas will be lacking. The benefits derivable from these ideas will not be concentrated on their originators. If we extend some degree of private rights to the originators, these ideas will come forth at a more rapid pace. But the existence of the private rights does not mean that their effects on the property of others will be directly taken into account. A new idea makes an old one obsolete and another old one more valuable. These effects will not be directly taken into account, but they can be called to the attention of the originator of the new idea through market negotiations. All problems of externalities are closely analogous to those which arise in the land ownership example. The relevant variables are identical.

Demsetz, *supra* note 18, at 359.

On the other hand, William Landes and Richard Posner explicitly reject such an approach in favor of the classic incentive-balancing approach discussed below. *See* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 37 (2003) [hereinafter LANDES & POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW];

the implications are obvious. The way to get private parties to invest efficiently in innovation is not only to give them exclusive ownership rights in what they produce, but to define those rights in such a way that they permit the intellectual property owner to capture the full social benefit of the invention.[34] The law should accordingly permit and even encourage mechanisms allowing intellectual property owners to price in ways that extract consumer surplus, such as Ramsey optimal pricing. In theory, this will encourage them to invest efficiently in identifying, developing, and commercializing new inventions as well as managing the inventions they have already made.[35] If the social value of innovation exceeds the private value, as apparently it does,[36] that simply means we don't have strong enough property rights, and too many people are free riding on the investments of innovators.[37] Further, if one postulates that transactions involving intellectual property are costless, society as a whole should benefit, since the owners of intellectual property rights will license those rights to others whenever it is economically efficient to do so.

Intellectual property law has traditionally been chock full of opportunites to free ride—rights didn't protect certain works at all, were of limited duration, had numerous exceptions for permissible uses, and didn't

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William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989) [hereinafter Landes & Posner, *An Economic Analysis of Copyright Law*] ("Striking the correct balance between access and incentives is the central problem in copyright law."). And no less an economic authority than Friedrich Hayek warned against equating real property and intellectual property: "[A] slavish application [to intellectual property] of the concept of property as it has been developed for material things has done a great deal to foster the growth of monopoly.... [D]rastic reforms may be required if competition is to be made to work." FRIEDRICH A. HAYEK, INDIVIDUALISM AND ECONOMIC ORDER 114 (1948).

34. Indeed, Brett Frischmann notes that "[a]t times, nonrivalry [the public goods characteristic of intellectual property] seems inextricably linked to nonexcludability and the associated risk of free riding." Brett Frischmann, *An Economic Theory of Infrastructure and Sustainable Infrastructure Commons*, 89 MINN. L. REV. (manuscript at 29) (forthcoming April 2005).

35. On the growth of the management theory of intellectual property and its problems, see Mark A. Lemley, *Ex Ante versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 132–41 (2004) [hereinafter Lemley, *Ex Ante*].

36. *See* MORTON I. KAMIEN & NANCY L. SCHWARTZ, MARKET STRUCTURE AND INNOVATION 16 (1982) (discussing studies that "show a substantial gap, more than double, between the social (55 percent) and private (25 percent) returns to the invention [that were] considered"); Edwin Mansfield et al., *Social and Private Rates of Return from Industrial Innovations*, 91 Q. J. ECON. 221, 233 (1977) (showing calculations of the median social rate of return in 17 innovations at 56% as compared to a 25% private rate of return). For more recent data, see WILLIAM D. NORDHAUS, SCHUMPETERIAN PROFITS IN THE AMERICAN ECONOMY: THEORY AND MEASUREMENT (Cowles Found., Working Paper No. 1457, 2004), *available at* http://cowles.econ.yale.edu/P/cd/d14b/d1457.pdf; Charles I. Jones & John C. Williams, *Measuring the Social Return to R&D*, 113 Q. J. ECON. 1119, 1121 (1998) ("Using a conservative estimate of the social return of 30 percent and a private rate of return to capital of 7 to 14 percent, optimal R&D spending as a share of GDP is more than two to four times larger than actual spending.").

37. JOSEPH FARRELL & CARL SHAPIRO, INTELLECTUAL PROPERTY, COMPETITION, AND INFORMATION TECHNOLOGY (manuscript at 18) (Competition Pol'y Ctr., Working Paper No. CPC04-045, 2004), *available at* http://repositories.cdlib.org/iber/cpc/CPC04-045.

cover various types of conduct. But if the economic goal of intellectual property is to eliminate free riding, these limits are loopholes to be excised from the law whenever possible. And so it has gone. By virtually any measure, intellectual property rights have expanded dramatically in the last three decades. Terms of protection are longer,[38] the number of things that are copyrightable has increased, it is easier to qualify for copyright protection,[39] copyright owners have broader rights to control uses of their works,[40] and penalties are harsher.[41] In addition, Congress has created entirely new rights.[42] These changes are directly tied to the reconceptualization of patents, copyrights, and trademarks as a form of property. Even some of the most careful scholars of intellectual property economics have suggested that copyrights should be perpetual, relying on the economic theory of property: "All valuable resources, including copyrightable works, should be owned, in order to create incentives for their efficient exploitation and to avoid overuse."[43] Trademark law, which was once limited to protecting against consumer confusion, has increasingly taken on the character of a property right, with the result that trademark "owners" now have the power to prevent various kinds of uses of their marks, regardless of whether consumers will be confused or search costs increased.[44] Courts and commentators increasingly speak of trade secrets as property rights, not simply rights to prevent tortious acts that breach standards of business ethics.[45] And notwithstanding

38. The length of the copyright term was extended 11 times between 1963 and 1998, and now stands at the life of the author plus 70 years. 17 U.S.C. § 302 (2000). Congress also changed the patent term from 17 years from issue to 20 years from filing, 35 U.S.C. § 154(a)(2) (2000), a change that my prior work has found adds length to the patent term for the majority of patentees. *See* Mark A. Lemley, *An Empirical Study of the Twenty-Year Patent Term*, 22 AIPLA Q.J. 369 (1994) [hereinafter Lemley, *Patent Term*].

39. *See* Ghosh, *supra* note 8, at 390 (noting the various types of works copyright has expanded to cover).

40. *See generally* Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275 (1989).

41. 17 U.S.C. §§ 505–506 (2000).

42. *See, e.g.*, Semiconductor Chip Protection Act, 17 U.S.C. §§ 901–914 (2000); Digital Millennium Copyright Act, 17 U.S.C. §§ 1201–1205 (2000); Vessel Hull Design Protection Act, 17 U.S.C. §§ 1301–1332 (2000); 17 U.S.C. § 1101 (2000) (creating an anti-bootlegging right); Federal Trademark Dilution Act, 15 U.S.C. § 1125(c) (2000); Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d) (2000).

43. William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 475 (2003).

44. *See* Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687 (1999) (discussing ways in which trademark law has expanded).

45. The U.S. Supreme Court treated trade secrets as property rights subject to a takings claim in *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1001–04 (1984). Commentators have argued that the Uniform Trade Secrets Act, in force in 42 states, adopts a view of trade secrets as property. *See, e.g.*, Lynn C. Tyler, *Trade Secrets in Indiana: Property vs. Relationship*, 31 IND. L. REV. 339, 339 (1998).

Supreme Court statements distinguishing the two,[46] they regularly refer to copyrights as property.[47]

Courts applying the property theory of intellectual property are seeking out and eliminating uses of a right they perceive to be free riding. Some treat copying as free riding.[48] They justify property-like protection for trademarks on the basis that it will prevent free riding.[49] They debate the proper role of patent law's doctrine of equivalents in terms of whether it permits free riding.[50] They permit the imposition of a private intellectual property-like restriction that would otherwise violate the antitrust laws on the grounds that the restriction is necessary to prevent free riding on data created by the restrictor.[51] The database protection bill considered in the 108th Congress expressly conditioned liability on loss occasioned by "the ability of other parties to free ride on the efforts of the plaintiff."[52] Courts have defined the elements of the quasi-intellectual property tort of misappropriation by reference to whether the defendant is free riding on the plaintiff's information.[53] Even the courts that reject intellectual property claims do so because they cannot find evidence of free riding.[54]

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46. Dowling v. United States, 473 U.S. 207, 216–17 (1985) ("The copyright owner . . . holds no ordinary chattel . . . for the copyright holder's dominion is subjected to precisely defined limits. It follows that interference with copyright does not easily equate with theft, conversion or fraud.").

47. *See, e.g.*, Feltner v. Columbia Pictures Television, Inc., 523 U.S. 340, 349 (1998) ("Actions seeking damages for infringement of common-law copyright, like actions seeking damages for invasions of other property rights, were tried in courts of law . . . .").

48. *See, e.g.*, Lowry's Reports, Inc. v. Legg Mason, 271 F. Supp. 2d 737, 746–47 (D. Md. 2003) (quoting Jane C. Ginsburg, *Copyright, Common Law, and Sui Generis Protection of Databases in the United States and Abroad*, 66 U. CIN. L. REV. 151, 162 (1997) ("[F]ree-riding . . . may be a pejorative description of copying, but it is still copying.") and relying on this equation to find that a state law targeting free riding was preempted as equivalent to copyright).

49. *E.g.*, Adidas-Salomon AG v. Fitnessworld Trading Ltd., [2004] 1 C.M.L.R. 14, ¶¶ 37–40.

50. *E.g.*, Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 627 (Fed. Cir. 2000) (en banc) (Linn, J., dissenting), *vacated by*, 535 U.S. 722 (2002).

51. *E.g.*, Morris Communications Corp. v. PGA Tour Inc., 364 F.3d 1288 (11th Cir. 2004) (upholding restrictions requiring delay of real-time scoring information in order to prevent free riding on the producer's investment in technology).

52. Database and Collections of Information Misappropriation Act, H.R. 3261, 108th Cong. (2d Sess. 2003) § 3(a)(3) (2004).

53. Nat'l Basketball Ass'n v. Motorola, Inc., 105 F.3d 841, 843 (2d Cir. 1997) (holding that "transmission of 'real-time' NBA game scores" via Motorola's pagers "does not constitute a misappropriation" of the NBA's property). The *Motorola* court defined the "hot-news" *International News Service* claims as including the following elements:

> (i) a plaintiff generates or gathers information at a cost; (ii) the information is time-sensitive; (iii) a defendant's use of the information constitutes free riding on the plaintiff's efforts; (iv) the defendant is in direct competition with a product or service offered by the plaintiffs; and (v) the ability of other parties to free-ride on the efforts of the plaintiff or others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.

Id. at 845.

54. *See, e.g.*, Ty, Inc. v. Perryman, 306 F.3d 509, 512 (7th Cir. 2002).

The focus on free riding leads to an assumption on the part of courts that all enrichment derived from use of an intellectual property right is necessarily unjust. We can see several examples in modern intellectual property law. Some examples involve the extension of IP rights to cover uses that don't cause harm directly to the intellectual property interest of the IP owner. Some courts see any use of a trademark by a competitor or third party as problematic, for example, not because it deprives the trademark owner of sales, confuses consumers, or increases search costs, but because it reflects "trading on the goodwill" of the trademark owner and therefore appropriates value that properly belongs to the trademark owner.[55] Others create new intellectual property rights (or quasi-intellectual property rights) to permit their "owners" to capture new uses of their public data online, their web servers, and even their golf handicap system.[56] The strong presumptive entitlement to injunctive relief in intellectual property is also consistent with the free riding rule, and indeed may encourage people to think of the intellectual property owner's right as absolute: An intellectual property owner gets to stop use of "their" property whether or not they are harmed by

55. 1-800 Contacts, Inc. v. WhenU.com, 309 F. Supp. 2d 467, 509 (S.D.N.Y. 2003) (issuing an injunction to "prevent Defendants from capitalizing on the goodwill and reputation that Plaintiff has earned through its own investment"); *see also* Playboy Enters., Inc. v. Netscape Communications Corp., 354 F.3d 1020, 1025 (9th Cir. 2004) (holding that "initial interest confusion impermissibly capitalizes on the goodwill associated with a mark and is therefore actionable trademark infringement"); *cf.* Nissan Motor Corp. v. Nissan Computer Co., 378 F.3d 1002 (9th Cir. 2004) (finding trademark infringement where the defendant capitalized on the goodwill of the plaintiff's mark for commercial benefit, even absent any plausible theory of confusion); I.P. Lund Trading ApS v. Kohler Co., 163 F.3d 27, 50 (1st Cir. 1998) (defining trademark dilution in terms of "an appropriation of or free riding on" the investment of a trademark owner). Eric Goldman identifies *Brookfield Communications, Inc. v. West Coast Enterprise Corp.*, 174 F.3d 1036 (9th Cir. 1999), and *Promatek Industries Ltd. v. Equitrac Corp.*, 300 F.3d 808 (7th Cir. 2002), as using the concept of "goodwill misappropriation" to replace the traditional test for likelihood of confusion. Eric Goldman, *Deregulating Relevancy in Internet Trademark Law*, 54 EMORY L.J. (manuscript at 46) (forthcoming 2005). Similarly, Vincent Chiappetta has referred to "mark free riding" and proposed that the law should "internaliz[e] the returns on the seller's 'goodwill.'" Vincent Chiappetta, *Trademarks: More Than Meets the Eye*, 2003 U. ILL. J.L. TECH. & POL'Y 35, 51. If Chiappetta means by this that trademark owners should be entitled to capture the full social value of their marks, he is mistaken. *See* Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777, 788 (2004) (explaining that "trademarks are not property rights in gross, but limited entitlements to protect against uses that diminish the informative value of marks"). More likely, Chiappetta is simply using "free riding" and "internalizing goodwill" as shorthand not for the user's gains, but for the trademark owner's lost ability to recoup necessary investments in marketing the brand. I have no problem with this latter form of argument, though I don't think it really justifies internalizing all benefits.

56. *See, e.g.*, Register.com, Inc. v. Verio, Inc., 356 F.3d 393, 404–06 (2d Cir. 2004) (upholding preliminary injunction to protect public online database from use by mass marketers); eBay, Inc. v. Bidder's Edge, 100 F. Supp. 2d 1058, 1073 (N.D. Cal. 2000) (granting preliminary injunction to prevent robotic search of eBay's web servers); *Morris Communications Corp.*, 364 F.3d at 1298 (upholding proprietary nature of the PGA Tour's real-time scoring system, which collects golf scores as they occur on the course).

the use.[57] The rationale here isn't generally that the intellectual property owner has been harmed, but that the defendant has benefited, and that benefit involves taking something that doesn't belong to them.

A second application of the free riding idea involves the remedies for intellectual property infringement.[58] Copyright law provides that the defendant must disgorge any profits attributable to its act of infringement.[59] It also provides for statutory damages so great that they generally overwhelm both the losses to the copyright owner and the benefits to the infringer,[60] for payment of attorney's fees,[61] and in many cases treats copyright infringement as a felony.[62] Trademark and trade secret law also require disgorgement of profits in at least some circumstances[63] and permit punitive damages and attorney's fees for willful acts of infringement.[64] Misappropriation of trade secrets and trademark infringement are also criminal offenses.[65] Patent law emphasizes deterrence least among the intellectual property regimes.[66] It does not require disgorgement of profits or criminal liability, though it does provide for attorney's fees and treble damages for willful infringement.[67] And injunctive relief will prevent defendant's uses, preventing free riding even in patent cases.

Disgorgement is the remedy most clearly connected to free riding. Anyone who benefits from the use of the intellectual property right must

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57. To be sure, there are other reasons one might prefer a property entitlement over a liability rule in the Calabresi-Melamed framework. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View From the Cathedral*, 85 HARV. L. REV. 1088, 1108 (1972). For example, because valuation of intellectual property is difficult, we may trust parties more than courts to determine the right license price. Indeed, this is the primary justification scholars have offered for injunctive relief in intellectual property cases. *See* ROBERT P. MERGES ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 297–99 (3d ed. 2003); Richard A. Epstein, *Steady the Course: Property Rights in Genetic Material*, *in* PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT 153, 171–79 (F. Scott Kieff ed., 2003). I don't challenge that justification here. I merely point out that a right to injunctive relief strengthens the assumption that any use of the IP right by the defendant is problematic.

58. For a discussion of restitutionary or unjust enrichment torts in intellectual property law, see Wendy J. Gordon, *Of Harms and Benefits: Torts, Restitution, and Intellectual Property*, 21 J. LEGAL STUD. 449 (1982).

59. 17 U.S.C. § 504(b) (2000).

60. *Id.* § 504(c).

61. *Id.* § 505.

62. *Id.* § 506.

63. 15 U.S.C. § 1117(a) (2000) (providing a disgorgement remedy, but limiting it to circumstances of intentional rather than good faith infringement); UNIF. TRADE SECRET ACT § 3 (amended 1985), 14 U.L.A. 455, 455 (1990).

64. 15 U.S.C. § 1117(b) (2000); UNIF. TRADE SECRET ACT § 3(c) (amended 1985), 14 U.L.A. 456, 459 (1990).

65. 18 U.S.C. § 1832 (2000) (misappropriation of trade secrets); *id.* § 2320 (trademark infringement).

66. For a good general discussion of the economics of intellectual property damages, see Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585 (1998).

67. 35 U.S.C. §§ 284–285 (2000).

forfeit the benefit to the intellectual property owner. Deterrence, like extensions of the scope of the intellectual property right, helps intellectual property owners internalize the positive externalities of their invention by preventing unauthorized uses and therefore encouraging licensing. But if the baseline assumption of the law is that the intellectual property owner is entitled to capture the full social value of the invention, it is that baseline that will drive any licensing negotiations.

One caveat before I continue. The rhetoric and theory of property are certainly not the only things driving courts, Congress, and commentators to expand the scope of intellectual property protection. There is a strong public choice component to the expansion too, particularly in Congress and particularly with respect to copyright law.[68] But the role of property theory is an important one, both because it provides intellectual heft to justify the expansion and because it offers courts an attractive label—"free rider"—that they can use both to identify undesirable conduct and to justify its suppression.

II. In Defense of Free Riding

A. No Property Owner Is Entitled to Capture the Full Social Value of Their Property

The assumption that intellectual property owners should be entitled to capture the full social surplus of their invention runs counter to our economic intuitions in every other segment of the economy. We do not permit producers to capture the full social value of their output. Nor do we permit the owners even of real property to internalize the full positive externalities associated with their property.

Let's begin with producers. In a market economy, we care only that producers make enough return to cover their costs, including a reasonable profit.[69] So long as that cost is covered, the fact that consumers value the good for more than the price, or that others also benefit from the goods produced, is not considered a problem. Indeed, it is an endemic part of the

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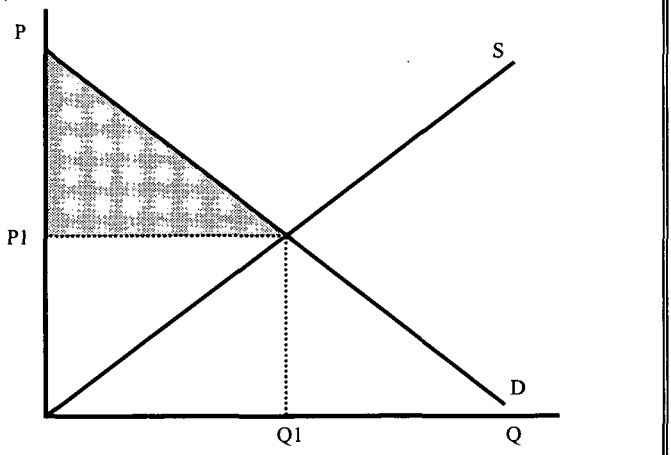
68. *See* Mark A. Lemley, *The Constitutionalization of Technology Law*, 15 BERKELEY TECH. L.J. 529, 532 (2000) [hereinafter Lemley, *Technology Law*] ("[I]t is far too easy for Congress to fall into a pattern of responding to private demands, rather than thinking proactively about what should be done. To a disturbing extent, Congress . . . seems to have abdicated its role in setting intellectual property policy to the private interests who appear before it."); *see also* Litman, *supra* note 40; Jessica D. Litman, *Copyright, Compromise, and Legislative History*, 72 CORNELL L. REV. 857 (1987) [hereinafter Litman, *Copyright*]. On the role of interest group pressure in driving propertization more generally, see Saul Levmore, *Two Stories About the Evolution of Property Rights*, 31 J. LEGAL STUD. 421 (2002). *Cf.* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 193–94 (2003) (suggesting that Congress may increasingly delegate the setting of digital copyright rules to the parties with concentrated interests in those rules).

69. DAVID D. FRIEDMAN, LAW'S ORDER 115 (2000) ("You will make something if and only if its value . . . is at least as great as the cost of making it.").

market economy. The very concept of "consumer surplus" in economics presupposes uncompensated positive externalities in the market for production.[70] I may be willing to pay $100 for a copy of *Hamlet*,[71] but I don't have to—producers will compete to sell it to me for far less. Thus, in Figure 1 everything in the shaded area is a social benefit from the producer's sale that is not captured by that producer. That discrepancy isn't a problem, because so long as the price stays above marginal cost producers will still make the good. The externality comes not with respect to the marginal consumer, but the higher-value consumer.

FIGURE 1



Indeed, if we were concerned with fully internalizing positive externalities in the marketplace, the ideal world would be one in which monopolists engaging in price discrimination were not just desirable but mandatory. We would favor monopoly pricing and cartels over competitive markets, because monopoly increases the returns to producers, bringing them closer to capturing the full social value of their goods, reducing the "free riding" in which all consumers engage every day. Centuries ago, property theorists took precisely this approach, seeing competition as a nuisance that courts should enjoin.[72] We don't draw any such conclusion today, of course.

70. PAUL SAMUELSON, ECONOMICS 456 (13th ed. 1989) ("The gap between the total utility of a good and its total market value is called consumer surplus. The surplus arises because we 'receive more than we pay for'; it is rooted in the law of diminishing marginal utility.").

71. The book, not the film. No rational consumer would be willing to pay $100 for a *Hamlet* film. Unless it has Mel Gibson in it, of course.

72. *See, e.g.*, MORTON J. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1780–1860, at 115 (1977) (attributing to Blackstone the view that competition between mills, bakeries, and river ferries could be enjoined on property principles). For a good discussion of the history of one such

Quite the contrary—antitrust law is devoted to preserving consumer surplus by favoring competition over monopoly,[73] and economists treat property as welfare-enhancing precisely because it facilitates the development of markets.

Tangible property law also implicitly rejects the idea that owners are entitled to capture all positive externalities. If I plant beautiful flowers in my front lawn, I don't capture the full benefit of those flowers—passers-by can enjoy them too.[74] But property law doesn't give me a right to track them down and charge them for the privilege[75]—though owners of property once tried unsuccessfully to obtain such a right.[76] Nor do I have the right to collect from my neighbors the value they get if I replace an unattractive shade of paint with a nicer one, or a right to collect from society at large the environmental benefits I confer by planting trees. The same is true in com-

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case in the United States, the *Charles River Bridge* case, see RAYMOND SHIH RAY KU, COPYRIGHT, THE CONSTITUTION AND PROGRESS (manuscript at 18–19, 29) (Case W. Res. Univ., Working Paper No. 04-8, 2004), *available at* http://papers.ssrn.com/abstract=556642.

73. *See* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 81–89 (1978) (describing consumer welfare as the only proper goal of antitrust law). Richard Posner, by contrast, argues that total welfare is the right measure for antitrust. RICHARD A. POSNER, ANTITRUST LAW 9–32 (2d ed. 2001). Posner's approach seems right, but his total surplus measure is still consistent with the idea that consumer surplus is a good and not an evil to be rooted out.

74. *See* 8 PHILIP AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW 153 (giving this as an example of free riding on the positive externalities created by others).

75. *See* Entick v. Carrington, 19 How. St. Tr. 1029, 1066 (K.B. 1765) ("[T]he eye cannot by the laws of England be guilty of a trespass."); Boyd v. United States, 116 U.S. 616, 628 (1886) (adopting the English view).

Admittedly, one reason this might be so in the example I have chosen is that the transaction costs of finding potential passers-by and setting a price with them ex ante would be quite high. *See* 8 AREEDA & HOVENKAMP, *supra* note 74, at 153 (making this point). But the law doesn't even give me a liability rule right to collect "damages" from passers-by I can identify, as it does in much of tort law. *See* A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 21–23 (1st ed. 1983) (discussing liability rules in tort); Calabresi & Melamed, *supra* note 57, at 1092 (comparing property rule, liability rule, and inalienability rule methods of protecting entitlements). Nor does it vest such a right in me in cases where the beneficiaries are few, clearly identifiable, and possible to deal with—think of the next-door neighbors who can see into my back yard, for instance. *Cf.* Demsetz, *supra* note 18, at 353–54 (noting that the creation of property rights reduces the cost of bargaining over externalities).

If the positive externalities associated with a particular use of property are sufficiently strong, property owners may invest in efforts to internalize those externalities—for example by fencing off a garden and charging admission. While the investment in building such a private garden will likely be of social value, the investment in building the wall generally will not be. And so it is with intellectual property—trade secrets law, for example, seeks to discourage the construction of inefficient "walls" that unnecessarily restrict access to information. *See, e.g.*, Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683, 696–97 (1980) (observing that, in *E.I. DuPont DeNemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970), the court rejected the idea that the plaintiff should have to build a roof to protect its trade secrets from aerial photography because "the law should not create incentives for otherwise wasteful expenditures").

76. *See* LAWRENCE LESSIG, FREE CULTURE 33–34 (2004) [hereinafter LESSIG, FREE CULTURE] (discussing the free riding arguments offered by property owners in the nineteenth century that they were entitled to prevent photographs of their property).

mercial settings. The fact that my popular store is located next to your obscure one may drive traffic to your store—indeed, the ubiquitous shopping mall is founded on this very idea—but I have no right to capture that value.

The very idea that the law should find a way to internalize these positive externalities seems faintly preposterous. Positive externalities are everywhere. We couldn't internalize them all even if we wanted to.[77] Areeda and Hovenkamp offer numerous examplcs of uncompensated positive externalities. They conclude that "free riding on the positive externalities created by others is everywhere, and society does little to eliminate it."[78] And as noted above, there is no reason we should particularly want to do so. If "free riding" ıneans merely obtaining a benefit from another's investment, the law does not, cannot, and should not prohibit it. If the marginal social cost of benefiting from a use is zero, prohibiting that use imposes unnecessary social costs.

We do sometimes try to internalize *negative* externalities in the real property context in order to avoid the tragedy of the commons. The central idea behind the tragedy of the commons is that joint or public ownership of a piece of property is inefficient, because nonowners who use the property have no incentive to take care of it and will therefore overuse it.[79] Thus, common land shared by cattle owners is overgrazed, because in the private calculus of each cattle owner, their benefit from grazing (which inures entirely to them) exceeds their benefit froın holding off (which is spread among all the users of the common). The property rights argument is that dividing the common into private property solves this problem, by making each property owner liable for the consequences of her own actions. We therefore internalize externalities in this case in order to avoid a particular social problem.

There is also one circumstance in which the internalization of positive externalities may be important in tangible property law: where the efficient use of a piece of property requires a substantial fixed investment that may produce benefits that are nonexcludable.[80] This is part of the classic definition of a public good.[81] It is not true of all property or all types of

77. *See* Gordon, *On Owning Information*, *supra* note 32, at 167 ("A culture could not exist if all free riding were prohibited within it.").

78. 8 AREEDA & HOVENKAMP, *supra* note 74, at 153.

79. *See, e.g.*, CAROL M. ROSE, PROPERTY AND PERSUASION 106 (1994).

80. The exception to this involves infrastructure, which as Brett Frischmann notes generates significant positive externalities. Frischmann, *supra* note 34 (manuscript at 6). It is worth noting that real property infrastructure—roads, bridges, airports, and the like—tend not to be privatized, arguably because of the positive externalities they generate. As Frischmann makes clear, the commons may be the most efficient means of providing many sorts of infrastructure. *Id.*

81. *See* Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 STAN. L. REV. 1329, 1337 (1987) (discussing the characteristics of publie goods—nonrivalrous consumption and nonexcludability).

investments, but only a subset. For these cases, unlike the normal market case, efficiency requires that we permit producers to recover not only marginal cost but to amortize their fixed cost as well. Real property has two ways of accommodating the need for such fixed-cost investments. First, consistent with the classic economics of public goods, the government may provide the resource. This is generally how we provide infrastructural goods such as roads, bridges, and airports. Alternatively, we may grant a private party the right to control the resource and internalize some of the benefits in the hope that the lure of those benefits will be sufficient to induce them to incur the fixed expense. Private toll roads are built on this model, for instance: in exchange for building the road, the government grants the builder a right to exclude others from what is ordinarily a public resource. Finally, in a functioning market private parties may organize to produce such a result. The owners of land may invest in improving it—building a shopping mall, for example—on the expectation that they will be able to reap some of the social benefits of the mall by charging rent to tenants who will share in the positive benefits of proximity to other stores.

Importantly, even in these infrastructure cases, private investment in real property is not dependent on the property owner fully internalizing positive externalities. The owners of toll roads don't capture the full social benefit of their road to users. And builders of malls may benefit neighboring property owners whose real estate values improve. But we don't need them to fully internalize positive externalities in order to invest—just to capture enough of the benefits of their investment to make it worthwhile. The remaining social surplus from their investment will be dissipated—by the market if the resource trades in a competitive economy or by government price regulation if it doesn't (as in the case of toll roads).

In short, society in general doesn't prohibit free riding. Internalization of positive externalities is not necessary at all unless efficient use of the property requires a significant investment that cannot be recouped another way. And even then, economic theory properly requires not the complete internalization of positive externalities but only the capture of returns sufficient to recoup the investment. Only where there is a tragedy of the commons do we insist on complete or relatively complete internalization of externalities.

B. Lessons for Intellectual Property

There is no tragedy of the commons in intellectual property. The idea of a tragedy of the information commons is fundamentally flawed because it misunderstands the nature of information. A tragedy of the commons occurs when a finite natural resource is depleted by overuse. Information cannot be depleted, however. Information is what economists call a pure "public good," which means both that its consumption is nonrivalrous—my use of an

idea does not impose any direct cost on you—and that it is not something from which others can easily be excluded.[82] Precisely because its consumption is nonrivalrous, information does not present any risk of the tragedy of the commons. It simply cannot be "used up."[83] Indeed, copying information actually multiplies the available resources, not only by making a new physical copy but by spreading the idea and therefore permitting others to use and enjoy it.[84] The result is that rather than a tragedy, an information commons is a "comedy" in which everyone benefits.[85] The notion that information will be depleted by overuse simply ignores basic economics.[86]

The lessons of the previous subpart suggest that we should not therefore be particularly worried about free riding in information goods. It is not that free riding won't occur with information goods; to the contrary, it is ubiquitous. Everyone can use $E=mc^2$, the words of Shakespeare, or the idea of the tragedy of the commons without compensating their creators. Because

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82. *See* MERGES ET AL., *supra* note 57, at 11–12 (explaining a public good and offering several examples in the context of ideas). While Chris Yoo suggests that copyright is an "impure" public good because it is fully excludable and partially nonrivalrous, Christopher S. Yoo, Copyright and the Theory of Impure Public Goods 29–33 (unpublished manuscript, on file with the author), I think he is wrong on both counts. While copyright owners are making Herculean efforts to fully exclude others in order to internalize the social benefits of their works, in practice it has proven essentially impossible to do so without the aid of court-ordered damages and injunctions. More importantly, there is nothing nonrivalrous about copyrighted information—my use of words or phrases simply doesn't use them up in any sense. True, the physical copies into which those works are sometimes embodied are rivalrous in consumption—only one person can read a single copy of a book at a time—but copyright law protects the intangible content, not the tangible form in which it is embodied. 17 U.S.C. § 202 (2000). Yoo seems to be using the idea of imperfect public goods not as an accurate description of intellectual property, but as a sort of cover for importing the literature on differentiated monopolistic competition. Yoo, *supra*, at 27–33.

83. *See, e.g.*, James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 L. & CONTEMP. PROBS. 33, 41 (2003) ("[A] gene sequence, an MP3 file, or an image may be used by multiple parties; my use does not interfere with yours."); Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age*, 66 L. & CONTEMP. PROBS. 89, 90 (2003) ("In Intellectual Space, [the tragedy of the commons argument] falls away, since there is no physical resource to be ruined by overuse.").

84. *See* Harold Smith Reeves, *Property in Cyberspace*, 63 U. CHI. L. REV. 761, 785 (1996).

85. *See* DAVID BOLLIER, SILENT THEFT: THE PRIVATE PLUNDER OF OUR COMMON WEALTH 37 (2002) (collecting references to the "comedy" or "cornucopia" or "inverse" commons that occurs with nondepletable information); Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129 (1998) (contrasting property rules concerning land, which typically produce "tragedies" of the commons, with intellectual property rules that can produce beneficial "comedies" of the commons); Benjamin G. Damstedt, Note, *Limiting Locke: A Natural Law Justification for the Fair Use Doctrine*, 112 YALE L.J. 1179, 1182–83 (2003) (suggesting that it is waste by underuse rather than depletion by overuse with which intellectual property theorists should be concerned). As Brett Frischmann puts it, "[N]onrivalry opens the door to much more than free riding." Frischmann, *supra* note 34 (manuscript at 17); *see* Paul A. David & Dominique Foray, *Information Distribution and the Growth of Economically Valuable Knowledge: A Rationale for Technological Infrastructure Policies*, *in* TECHNOLOGICAL INFRASTRUCTURE POLICY: AN INTERNATIONAL PERSPECTIVE 87 (Morris Teubal et al. eds., 1996) (highlighting the economic and technological benefits flowing from an openly accessible and widely distributed store of knowledge).

86. *See* Lemley, *Ex Ante*, *supra* note 35, at 143 (making this point in more detail).

the use of those ideas or words does no harm to their creator, they are not the sort of uses with which property theory tells us we should be concerned.[87] As we have seen, there is no general reason to worry about uncompensated positive externalities. Indeed, part of the point of intellectual property law is to *promote* uncompensated positive externalities, by ensuring that ideas and works that might otherwise be kept secret are widely disseminated.[88]

Courts that subscribe to the rhetoric of property and free riding miss this point. In *Register.com v. Verio*, for example, the court held that the defendant violated the law by accessing internet WHOIS data on plaintiff's website, even though WHOIS data are, by the design of the internet, free for anyone to use.[89] The court analogized the defendant to someone who had taken an apple from a tree on plaintiff's property.[90] In fact, however, because information rather than tangible goods were at stake, and so the plaintiff was not in fact deprived of anything,[91] a better analogy might be a defendant who had admired from the street a tree on plaintiff's property. Taking an apple seems like a bad thing because we assume that consumption is rivalrous and the taking deprives the owner of something. Change the analogy to "taking"

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87. From an economic perspective, therefore, it makes sense to distinguish the plaintiff's losses from the defendant's gains in setting intellectual property remedies. *But cf.* Gordon, *supra* note 58, at 449 (evaluating the different treatment of harms and benefits in intellectual property remedies and arguing that restitutionary remedies should be permitted).

There are some types of information whose value resides in being kept secret. Most relevant for our purposes are trade secrets, though insider trading may also qualify. *See generally* JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF INFORMATION SOCIETY (1996). Some have argued that information is not a public good because its value may depend on secrecy. Amitai Aviram & Avishalom Tor, *Overcoming Impediments to Information Sharing*, 55 ALA. L. REV. 231, 234–35 (2004). That's not preeisely right, however. The value in question in these cases is not the intrinsic value of the information, but additional value conferred by virtue either of treating the information as a form of property or of the ability to distort the market away from perfect competition by denying others access to information. The former argument is circular—information is not a public good in that instance only because the law has chosen to privatize the good. The latter argument does identify a rivalry in actual consumption. But it mistakes the fact that the information is not known—a market imperfection—for the intrinsic nature of the information in question, which could still be consumed nonrivalrously if it were widely known.

88. *See, e.g.*, Bell, *supra* note 2, at 264–65 ("[C]opyright focuses on generating positive externalities. . . . [C]opyright concentrates on increasing the public good afforded by expressive works."); Robert Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 UCLA L. REV. 1, 7 (1995) ("[T]he more works that are disseminated, the more [copyright's] goal is advanced."); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 736 (2002) ("[P]atent rights are given in exchange for disclosing the invention to the public."); W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1550 (Fed. Cir. 1983) ("Early public disclosure is a linchpin of the patent system.").

89. 356 F.3d 393, 397, 402–03 (2d Cir. 2004).

90. *Id.* at 401–02.

91. Plaintiff did assert an interference with its servers as part of a trespass to chattels claim, but even the courts that granted it relief recognized that there was in fact no such interference with the operation of the servers. *Id.* at 404.

a look, and the equities seem rather different.[92] We prohibit "taking a look" only where it causes harm, for example by invading the privacy of another. Treating information like real property leads us to think of a use of that information as free riding, and therefore as something that ought to be prohibited, when in fact it shouldn't.

This doesn't mean that intellectual property law is a bad idea. Rather, the basic economic justification for intellectual property law comes from what was only an occasional problem with tangible property—the risk that creators will not make enough money in a market economy to cover their costs. The production of any good involves fixed cost investments, which must be made before production, and variable or marginal costs, which are incurred each time a new unit is produced. For most tangible goods, a price high enough to cover the marginal cost of making another good, plus a reasonable profit, is sufficient to generate a return on fixed capital investments. Information is different from ordinary goods because the marginal cost of reproducing it is so low.[93] While the fixed cost associated with producing a particular piece of information will vary from industry to industry—writing this Article involved very few fixed costs, while making *The Lord of the Rings* films required the outlay of hundreds of millions of dollars—the *ratio* of fixed to marginal costs is much higher for information than for other types of goods. That ratio is increasing as the internet makes the distribution of additional copies of many types of information virtually costless.[94] Figure 2 demonstrates the problem by comparing average fixed costs and marginal costs in a typical industry and in an information industry. In a typical industry, marginal cost is represented by line 1. Because marginal costs increase over much of the range of production, average total costs will too (line 2). The producer minimizes its average total costs by generating just enough to reach the low point of the curve. By contrast, in an information industry, marginal cost (line 4) is zero or close to it, and the average total cost curve (line 3) therefore declines over the entire range of

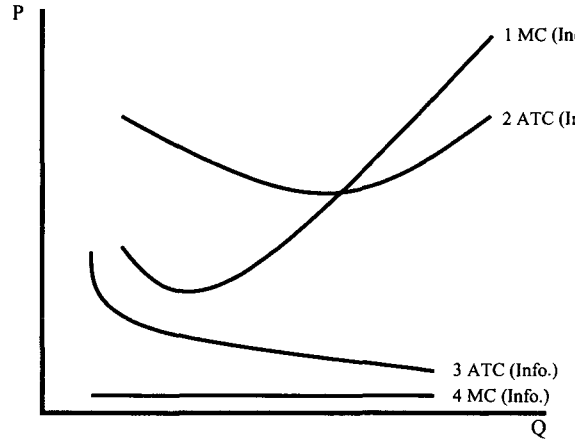
92. I am indebted to Brett Frischmann for this example.

93. It is an oversimplification to say that the marginal cost of producing information goods is zero. Producing and selling copies of a CD requires manufacturing the disc and the case, producing copies of the cover and liner notes, wrapping the whole thing in plastic, delivering it to a store, and engaging in a sales transaction. These costs may be low relative to the fixed costs of recording the CD, but they are not zero. The same is true for books, DVDs, and the machines or products that embody patented inventions. The fact that infringers must bear these marginal costs too has traditionally limited the economic loss to intellectual property owners from counterfeiting.

94. Thus, while I noted above that counterfeiters must pay marginal costs too, in the online environment that is no longer true for many types of works. *See* Mark A. Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement Without Restricting Innovation*, 56 STAN. L. REV. 1345, 1373–79 (2004) (observing that the advent of digital dissemination has virtually eliminated the costs of copy production and distribution). As the marginal cost of distribution falls to zero, the ratio of fixed to marginal costs approaches infinity, making the risk greater that a creator will not be able to recover his fixed costs.

market demand. The producer of such an information good minimizes its average total costs by selling throughout the full range of market demand.

FIGURE 2



In a private market economy, individuals will not generally invest in invention or creation unless the expected return from doing so exceeds the cost of doing so—that is, unless they can reasonably expect to make a profit from the endeavor.[95] To profit from a new idea or a work of authorship, the creator must be able either to sell it to others for a price or to put it to some use which provides her with a comparative advantage in a market.[96]

Selling information requires disclosing it to others. Once the information has been disclosed outside a small group, however, it is extremely difficult to control. Information has the characteristics of a "public good"—it may be "consumed" by many people without depletion, and it is difficult to identify those who will not pay and prevent them from using the information.[97] If we assume that it is nearly costless to distribute information to others, it will prove virtually impossible to charge enough for information to recoup any but the most modest fixed-cost investments. If the author of a book charges more than the cost of distribution, hoping to recover some of her expenditures in writing the work, competitors will quickly jump

95. The argument in the next two paragraphs is derived from Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEXAS L. REV. 989 (1997) [hereinafter Lemley, *Economics of Improvement*].

96. The latter may occur, for example, where an idea for a more efficient machine is used to reduce the cost of producing goods, allowing the owner of the idea to compete more effectively in selling those goods.

97. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 614–16 (Nat'l Bureau of Econ. Research 1962).

in to offer the book at a lower price. Competition will drive the price of the book towards its marginal cost—in this case the cost of producing and distributing one additional copy. In this competitive market, the author will be unable to recoup the fixed cost of writing the book. More to the point, if this holds generally true, authors may be expected to leave the profession in droves, since they cannot make any money at it. The result, according to economic theory, is an underproduction of books and other works of invention and creation with similar public goods characteristics.[98]

Intellectual property, then, is not a response to allocative distortions resulting from scarcity, as real property law is. Rather, it is a conscious decision to *create* scarcity in a type of good in which it is ordinarily absent in order to artificially boost the economic returns to innovation.[99] If property law is the creation of barriers to entry, as Demsetz suggests, the question is whether those barriers are properly scaled to the problem.[100] But solving the "problem" of intellectual property does not require complete internalization of externalities.

There is one exception to this general rule. Scholars occasionally suggest that use of information created by another might create negative externalities in unusual circumstances. Generally, this is where the audience has come to rely on a consistent impression of a work, and the new use detracts from that consistent impression.[101] Examples might include songs or art works that cast Barbie in a light that Mattel—and perhaps young girls—

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98. *See, e.g.*, F. M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 444 (2d ed. 1980) ("If pure and perfect competition in the strictest sense prevailed continuously . . . incentives for invention and innovation would be fatally defective without a patent system or some equivalent substitute."). Scherer goes on to note, however, that natural market imperfections may give advantages to first movers, reducing the need for intellectual property protection. *Id.* at 444–45.

99. *See* Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, *reprinted in* SELECTED ECONOMIC ESSAYS AND ADDRESSES 36 (Inst. of Econ. Affairs ed. 1974); *see also* Julie E. Cohen, Lochner *in Cyberspace: The New Economic Orthodoxy of "Rights Management"*, 97 MICH. L. REV. 462, 495–515 (1998). Landes and Posner disagree, arguing that "information is a scarce good, just like land." LANDES & POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW, *supra* note 33, at 374. But they are mistaken, I think. They make this point in the context of arguing that intellectual property rights don't always or even generally confer market power. That is true enough. But it does not follow that information is scarce or that it resembles real property in its economic characteristics. As I have shown in the text, there are important differences between the two.

100. Harold Demsetz, *Barriers to Entry*, 72 AM. ECON. REV. 47, 49, 52 (1982); *cf.* Yochai Benkler, *Overcoming Agoraphobia: Building the Commons of the Digitally Networked Environment*, 11 HARV. J.L. & TECH. 287, 318 (1998) (noting the problem of defining property rights at the wrong level of generality in ways that give rights to exclude competition).

101. *See* Justin Hughes, *"Recoding" Intellectual Property and Overlooked Audience Interests*, 77 TEXAS L. REV. 923, 952 (1999) (noting that passive listeners may have an interest in the stability of meaning in a wide range of cultural objects); Landes & Posner, *supra* note 43, at 487–88 (arguing that the unlimited use of a previously eopyrighted character (such as Mickey Mouse) would lead not only to the public tiring of that character, but also to the blurring of its image when authors freely portray it in conflicting ways).

find unfavorable.[102] While such negative externalities are possible, they seem unlikely to significantly affect the analysis above or to serve as a justification for complete internalization of externalities via intellectual property rights in general, for a variety of reasons I have explained elsewhere.[103]

Christopher Yoo has modeled intellectual property rights as examples of monopolistic competition, building on the work of Harold Hotelling in explaining how companies most efficiently differentiate their products. Yoo argues that granting strong property rights to control works will have minimal effects on competition because it will merely encourage more creators to enter, bringing differentiated products closer and closer together and reducing price.[104] In effect, Yoo's monopolistic competition model

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102. *See, e.g.*, Mattel, Inc. v. MCA Records, Inc., 296 F.3d 894 (9th Cir. 2002) (permitting a song to parody Barbie); Mattel, Inc. v. Walking Mountain Prods., 353 F.3d 792 (9th Cir. 2003) (permitting an artist to parody Barbie).

103. In a prior article, I wrote:

> First, this effect would seem to apply only to the subset of works that have become cultural icons around which people have expectations. Thus, it is better as a justification for the right of publicity than for copyright, where Landes and Posner locate it, and doesn't justify patent protection at all. Second, there is substantial social value to allowing people to criticize and subvert cultural icons. At a minimum, that social value needs to be weighed against any demand-reducing effect. Third, the problem seems self-limiting. If customers want the original *Gone With the Wind*, not the rather more sordid story of ALICE RANDALL, THE WIND DONE GONE (2001), there won't be a large market for the latter, and we shouldn't expect them to proliferate sufficiently to drive out demand for the former. If they do proliferate, however, presumably we should question our intuition that customers want the real thing and not the retelling. Where a work is truly iconic, even repeated debasement is unlikely to affect public perceptions. Justin Hughes observes that the Statue of Liberty, the Mona Lisa, Mount Rushmore and the Eiffel Tower retain their iconic status despite repeated uses and abuses in many different contexts. So too do the works of Shakespeare, Frankenstein, Dracula, Scrooge, Uncle Sam, and King Arthur. Hughes, *supra* note 101, at 961. Reducing the value customers place on the original *Gone With the Wind* is likely to be a problem only where there is a substantial increase in social value among the large group of people who demand the retelling from the slave's perspective. Fourth, the prospect of competition to produce sequels may actually spur creators to write their own sequels more quickly and make them better. For example, Cervantes was moved to write the second part of *Don Quixote* more quickly because another author published an unauthorized sequel to the first part, and the book is arguably better for it. *See* WILLIAM BYRON, CERVANTES: A BIOGRAPHY 499 (1978). (I am indebted to Larry Lessig for this example.) Finally, even at its strongest the recoding argument justifies controls only on unauthorized derivative works, not controls on reproduction of copyrighted works that have entered the public domain. It therefore cannot by itself justify the present scope of intellectual property rights.

Lemley, *Ex Ante*, *supra* note 35, at 145–46 (updated and adapted, with some sources omitted). Even if these negative externalities were a significant concern, copyright owners can and occasionally do take steps to deal with them even without a right to control negative portrayals. *See, e.g.*, Chris Suellentrop, *Garfield: Why We Hate the Mouse but Not the Cartoon Copycat*, *at* http://slate.msn.com/id/2102299 (June 11, 2004) (documenting how the creator of Garfield takes steps to avoid public backlash).

104. Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 226–31 (2004).

encourages rent-seeking by deliberately over-rewarding creators on the theory that doing so will encourage new creators to enter seeking a similar rent. This model is useful, but it is important to recognize its limits. First, Hotelling's original model did not deal with intellectual property rights,[105] and so his assumption of entry in response to competition did not account for legal limits on how close to existing companies new entrants can come. For Hotelling, the more attractive a product monopoly, the more companies will enter and crowd around it, dissipating the economic rents. With intellectual property, that mechanism won't work. The broader the scope of an intellectual property right, the less room there is for new innovators to develop and market new products, because the law itself restricts that competition. Further, increasing the strength of intellectual property rights has diminishing returns in terms of encouraging marginal inventions of any value to society, while at the same time increasing costs to consumers. Thus, Yoo's model does not suggest there is no tradeoff between encouraging invention and static consumer welfare—merely that the relationship between the two is dynamic.

How do the implications of my approach differ from the free riding argument I rejected in the previous subpart? The critical difference is that intellectual property law is justified only in ensuring that creators are able to charge a sufficiently high price to ensure a profit sufficient to recoup their fixed and marginal expenses. Sufficient incentive, as Larry Lessig reminds us, is something less than perfect control.[106] Economic theory offers no justification for awarding creators anything beyond what is necessary to recover their average total costs. The question is whether, as Landes and Posner put it, "making intellectual property excludable creates value."[107] Intellectual property rights are justifiable only to the extent that that excludability does in fact create value. Broader formulations—such as an outright prohibition on free riding—are too broad because they don't distinguish between uses that interfere with necessary incentives to create and uses that do not.[108] They seek to transfer wealth from the user to themselves, but there is no economic reason to support such a transfer.

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105. Harold Hotelling, *Stability in Competition*, 39 ECON. J. 41 (1929).

106. Lawrence Lessig, *Intellectual Property and Code*, 11 ST. JOHN'S J. LEGAL COMM. 635, 638 (1996) ("'Sufficient incentive,' however, is something less than 'perfect control.'"). Thus, it may make sense to speak of information as a "semicommons" subject to some but not complete privatization. *See* Robert A. Heverly, *The Information Semicommons*, 18 BERKELEY TECH. L.J. 1127 (2004).

107. LANDES & POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW, *supra* note 33, at 379.

108. *See* Richard A. Posner, *Misappropriation: A Dirge*, 40 HOUS. L. REV. 621, 625 (2003) ("[U]nless misappropriation is defined narrowly with respect to particular forms of copying rather than equated to free riding, it is too sprawling a concept to serve as the organizing principle of intellectual property law."); *see also id.* at 638 ("[T]he unauthorized use of another's intellectual property, unlike the unauthorized use of another's physical property, lacks clear normative significance.").

One other way in which economic analysis of intellectual property differs from the property analysis is that while incentives may be necessary in the case of copyrighted and patented creations, and even trade secrets and databases, incentives cannot justify intellectual property rights in trademarks or the right of publicity.[109] The economic support for those laws must be found elsewhere, in efforts to reduce consumer search costs, avoid confusion, or protect privacy,[110] or perhaps in a rare case by negative externalities from the use of intellectual property described above. As Stephen Carter has observed, the search costs rationale explains the classic contours of these doctrines, but cannot justify the rather dramatic expansion of both doctrines under the property rubric.[111]

C. *What's Wrong With Overcompensating Creators?*

The argument so far shows that there is no economic justification for granting inventors and creators the right to control positive externalities flowing from their creations, except to the extent necessary to enable them to cover their average fixed costs. But, the reader might object, showing that there is no *need* to grant such control doesn't compel the conclusion that there is anything wrong with giving creators greater control over positive externalities. Wouldn't it be easier just to treat intellectual property rights as absolute?

There are a number of costs to granting overbroad intellectual property rights. Because most of these arguments are well known in the literature, I will detail them only briefly here. These costs fall into five categories. First, intellectual property rights distort markets away from the competitive norm, and therefore create static inefficiencies in the form of deadweight losses. Second, intellectual property rights interfere with the ability of other creators to work, and therefore create dynamic inefficiencies. Third, the prospect of intellectual property rights encourages rent-seeking behavior that is socially wasteful. Fourth, enforcement of intellectual property rights imposes administrative costs. Finally, overinvestment in research and development is

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109. William Kratzke has made this point effectively, deconstructing the unjust enrichment or "free riding" rhetoric of trademark cases, which as he points out are conclusionary epithets rather than workable economic principles. *See* William P. Kratzke, *Normative Economic Analysis of Trademark Law*, 21 MEMPHIS ST. U. L. REV. 199, 223 (1991). While Chiappetta talks about incentive-based justifications for trademark law, *see* Chiappetta, *supra* note 55, at 37–38, those justifications are really derivative of the consumer search cost rationale, since there is no reason other than enhancing consumer information and lowering consumer search costs why we should want to reward investments in marketing and advertising.

110. Stacey Dogan and I have argued elsewhere that these rationales, not a property rights rationale, in fact justify both trademark law and the right of publicity. Dogan & Lemley, *supra* note 55; Stacey L. Dogan & Mark A. Lemley, What the Right of Publicity Can Learn From Trademark Law (vaporware 2004).

111. Stephen L. Carter, *Owning What Doesn't Exist*, 13 HARV. J. L. & PUB. POL'Y 99, 105–07 (1990).

itself distortionary. The ultimate result of these costs is that, as David Friedman puts it, "what we want . . . is not merely an incentive but the right incentive."[112]

Not every intellectual property right will impose these costs, of course. Most rights don't confer any significant power over price. Indeed, most patents are never enforced or licensed.[113] But they are not the important ones. The intellectual property rights that spur creativity do so precisely because they give their owners a return in excess of marginal cost. And in doing so, they risk the costs I discuss in this subpart. They are also the ones on which a defendant is most likely to "free ride"—there seems less likelihood that anyone will copy an unsuccessful invention or parody an out-of-print book.

The first form of cost is the classic deadweight loss associated with deviations from the competitive norm. Intellectual property rights are designed to give creators incentives to create by giving them a reward greater than they would obtain in a competitive market. By definition, therefore, the intellectual property system permits owners to raise price above marginal cost, creating deadweight losses by raising the price to consumers. If it doesn't do that, it isn't working. This doesn't mean that all intellectual property rights are monopolies in the antitrust sense, of course.[114] Indeed, few are. But it does mean that some consumers who are not willing to pay more than it costs to make a copy of a work will be denied access to that work.[115] The result is a static economic inefficiency that may be great or trivial, depending on the intellectual property right in question, but which must be balanced against the benefits we get from expanding intellectual property

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112. FRIEDMAN, *supra* note 69, at 135.

113. *See* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1507 (2001) [hereinafter Lemley, *Rational Ignorance*] (estimating that no more than 5% of all patents are licensed).

114. *See* 1 HERBERT HOVENKAMP ET AL., IP AND ANTITRUST § 4.2 (2004) (noting that intellectual property rights generally don't confer market power for antitrust purposes).

115. *See, e.g.*, Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 296 (2003) ("[F]rom an ex post perspective, excluding rivals from any property rights valuable and unique enough to enjoy monopoly power will generally constrain consumer choice, lower output, and raise prices, thus producing allocative inefficiency. This is certainly true with intellectual property . . . ."). Those who apply monopolistic competition models to innovation necessarily treat intellectual property rights as "mini-monopolies" conferring at least some power over price, though less than control over an entire economic market. *See* William A. Drennan, *Changing Invention Economics by Encouraging Corporate Inventors to Sell Patents*, 58 U. MIAMI L. REV. 1045, 1094–95 (2004).

This deadweight loss could be avoided if intellectual property owners had the power to perfectly price discriminate. *See* Harold Demsetz, *The Private Production of Public Goods*, 13 J. L. & ECON. 293 (1970). But perfect price discrimination seems essentially impossible, and imperfect price discrimination has indeterminate welfare effects. For discussions of price discrimination in intellectual property, see, for example, Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799 (2000); Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55 (2001).

rights. This inefficiency is well established in the literature on intellectual property economics.[116]

A second cost to strong intellectual property protection is dynamic. Inventions are not created in a vacuum.[117] They build on existing technology and ideas. But those ideas themselves were once new. Giving inventors or creators control over all the positive externalities associated with their inventions means giving them control over improvements and new uses that might be made of their works. But doing so may retard improvements in a variety of ways. Central control by original inventors may simply give less incentive to improve on first-generation technology than competition for the rights to improvements. While there is substantial debate about how best to promote innovation—through the control of monopoly or the spur of competition[118]—there is substantial evidence that, at least in some industries, competition is a stronger spur to innovation.[119] One argument is that "possession of unchallenged economic power deadens initiative, discourages thrift and depresses energy; that immunity from competition is a narcotic, and rivalry is a stimulant, to industrial progress."[120] Further, giving an original inventor control over the search for subsequent improvements leaves improvers vulnerable to bargaining breakdown, strategic behavior, or valuation error.[121]

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116. *See, e.g.*, WILLIAM NORDHAUS, INVENTION, GROWTH AND WELFARE: A THEORETICAL TREATMENT OF TECHNOLOGICAL CHANGE (1969); SCHERER, *supra* note 98, at 450–51 (documenting patent holders pricing in excess of cost). For a discussion of the literature, see Lemley, *Economics of Improvement*, *supra* note 95, at 996–97.

117. Well, actually, some are. *Cf.* 35 U.S.C. § 105 (2000) (governing inventions made in outer space). But not in a *metaphorical* vacuum.

118. The classic argument cited in favor of monopolists coordinating innovation is JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 100–03 (Harper 3d ed. 1962).

119. *See* Arrow, *supra* note 97, at 620 (concluding that "preinvention monopoly power acts as a strong disincentive to further innovation"); *see also* KAMIEN & SCHWARTZ, *supra* note 36 (discussing various theories of the effects of economic structures on the rate and form of innovation); F. M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 660 (Houghton Mifflin 3d ed. 1990) (criticizing Schumpeter's "less cautious" followers for advocating monopoly to promote innovation). In the specific context of intellectual property, the canonical argument from both theory and empirical evidence is Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839 (1990). *See also* Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 252 (1994) (noting that in the computer industry, for example, companies coordinate improvements by broad cross-licensing because of "the pace of research and development and the market interdependencies between inventions"). For discussions of particular industries in which competition appears to spur innovation, see, for example, Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 960–62 (2001) (the internet); Rai, *supra* note 8, at 709–10 (biotechnology); Howard A. Shelanski, *Competition and Deployment of New Technology in US Telecommunications*, 2000 U. CHI. LEGAL F. 85, 85 (telecommunications).

120. United States v. Alcoa, 148 F.2d 416, 427 (2d Cir. 1945) (noting the argument but not necessarily endorsing it).

121. For a variety of reasons, society cannot rely on pioneers to efficiently license to improvers the right to compete with them. *See* Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1072–73 (1989) ("The risk that

The uncertainty inherent in the scope of intellectual property rights may further chill improvement by leaving improvers unclear whether they are running afoul of a pioneer's intellectual property right.[122] A final problem is that the greater the right of the initial creator to capture all of the benefits conferred by the invention, the less supracompetitive profit will be available for those who come up with new uses of the invention. If the initial property right is perfectly airtight, new users capture none of the benefit of their improvement. Indeed, they could actually incur a loss if the patentee can demand the full social value of its invention, including improvements and new uses, while the improver is unable in turn to capture consumer surplus perfectly from its consumers.[123]

This situation could occur either with an improver who competes with the patent owner or with one who opens up a new market. If there is a chain of markets, each with its own positive externalities, the initial owner may demand a fee for licensing that is less than the aggregate social value across all markets, but greater than the private value users can capture. This is particularly likely if the downstream uses involve tangible rather than intellectual property, since as we've seen there is no legal right to control the social surplus associated with non-intellectual property. In this case, market failure will cause us to forego efficient new uses. Alternatively, the improver might want to sell a product in competition with the patentee that increases social surplus but reduces producer surplus. For example, suppose that the patentee has produced an invention, and that a potential improver wants to adapt the invention to compete in the same market. The social value of the

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the parties will be unable to agree on . . . a license is greatest when subsequent researchers want to use prior inventions to make further progress in the same field in competition with the patent holder, especially if the research threatens to render the patented invention technologically obsolete."); Lemley, *Economics of Improvement*, *supra* note 95, at 1048–72 (offering a variety of reasons why granting exclusive control to pioneers is inefficient); Robert P. Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 89 (1994) (noting the bilateral monopoly created by giving pioneers exclusive control of their inventions and suggesting that the resulting bargaining breakdowns are a function of mistaken assumptions and irrational decisions); Merges & Nelson, *supra* note 119, at 865 (suggesting that improvement patents are a reasonable solution to the bargaining impasse between pioneers and improvers in cases where the original invention contributes at least half, roughly, of the value of the improved invention). It may also simply be hard to value a yet-to-be-made improvement. Frischmann, *supra* note 34 (manuscript at 25, 37).

122. This is a particular problem in patents, where the scope of rights is inherently uncertain. *See* Dan L. Burk & Mark A. Lemley, *Quantum Patent Mechanics*, 35 LEWIS & CLARK L. REV. (forthcoming 2005). But the uncertainty of scope affects other intellectual property rights as well. While intensifying rights (by getting rid of fair use, say) would reduce uncertainty in some respects, it would not solve the inherent problem of knowing how far an intellectual property right extends.

123. Farrell and Shapiro note that "the profit-maximizing firm does not account for the consumer surplus generated by its invention . . . when picking its R&D investment level. Effectively, invention generates a positive externality." FARRELL & SHAPIRO, *supra* note 37 (manuscript at 18). Farrell and Shapiro believe this fact suggests that the patent system provides insufficient incentives for inventors, *id.*, though as I have noted above I think that conclusion is mistaken—producers do not need to internalize consumer surplus in order to have proper incentives.

use of the improved invention is $100, but the improver will only capture $60 of that value; the rest is consumer surplus. These competitive sales will displace sales by the patentee with a total social value of $80 and a private value of $65. The patentee will demand at least $65 to permit the use, more than the improver can pay.

The problem is a more general one, as Brett Frischmann notes: "[E]conomic analysis of many infrastructure resources fails to fully account for how the resources are used as inputs to create social benefits and thus fails to fully account for the social demand for the resources."[124] In short, granting perfect control privileges initial inventors at the expense of improvers and may therefore actually reduce the size of positive externalities from invention by discouraging the improvements and new uses which generate those externalities.

A third cost to intellectual property protection is strategic. The grant by the government of exclusive rights over inventions, like the grant of any government largess, inevitably attracts attention by those who would like to get their share of benefits from the government. In the intellectual property context, this "rent-seeking" behavior takes two different forms. First, the fact that patents in particular are granted to the first to invent may lead to races to invent. Some have worried that this racing will lead to wasteful duplication of research effort.[125] I'm not particularly concerned about such duplication, in part because a race tends to accelerate innovation, leading to social welfare benefits,[126] in part because it leads to the development of

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124. Frischmann, *supra* note 34 (manuscript at 12–13) (also making the same point on the demand side); W. Edward Steinmueller, *Technological Infrastructure in Information Technology Industries*, *in* TECHNOLOGICAL INFRASTRUCTURE POLICY: AN INTERNATIONAL PERSPECTIVE, *supra* note 85, at 117 (discussing this point with respect to transportation and communication infrastructure networks).

125. One goal of granting the prospect right in advance of the invention is to forestall competitors' wasteful races to invent. *See* Jennifer F. Reinganum, *The Timing of Innovation: Research, Development, and Diffusion*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 849 (Richard Schmalensee & Robert D. Willig eds., 1989) (discussing the costs of patent races); Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 306 (1992) (same); Matthew Erramouspe, Comment, *Staking Patent Claims on the Human Blueprint: Rewards and Rent-Dissipating Races*, 43 UCLA L. REV. 961, 962 (1996) ("Although a gold rush has its winners, many claims are ultimately unproductive, and thus many prospectors waste valuable resources and go unrewarded. Gold rushes are also unproductive in a broader social sense. Follow-on prospectors bid resources away from higher valued uses outside the prospecting industry to lower valued uses inside it."); *cf.* Doug Lichtman et al., *Strategic Disclosure in the Patent System*, 53 VAND. L. REV. 2175, 2177 (2000) (discussing the strategic disclosure of information by participants in patent races); Gideon Parchomovsky, *Publish or Perish*, 98 MICH. L. REV. 926, 929–30 (2000) (same). Indeed, Yoram Barzel analogizes patent races to the tragedy of the commons because they involve "overuse" of research. Yoram Barzel, *Optimal Timing of Innovations*, 50 REV. ECON. & STAT. 348 (1968). But the analogy is imperfect at best, both because there is no actual damage from duplication and because, as noted below, patent races often produce beneficial results.

126. Races bring us innovation earlier than we would otherwise get it, and that acceleration creates social value. *See* John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L.

alternative means of solving the same problem, a process which generates its own positive externalities,[127] and in part because duplication of effort may drive duplicators to find different uses for the same invention. But John Duffy has shown that even those who view patent races as a negative must oppose setting intellectual property protection equal to the full social surplus from the invention,[128] a point which supports the one I make here. Intellectual property rights may also encourage rent-seeking via advertising and marketing efforts that dissipate some of the social value of the surplus.[129]

Second, and more problematic, the very process of government granting rights over creations encourages creators to petition Congress to give them still more rights. This sort of legislative rent-seeking has proven to be a real problem in intellectual property, particularly in the copyright field, where Congress of late seems willing to give copyright owners whatever they ask for, at least as long as there is no large vested interest making demands on the other side.[130] This rent-seeking is a cost of government-grantcd

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REV. 439 (2004). For a powerful critique of rent-dissipation theories in the copyright context, see MICHAEL ABRAMOWICZ, COPYRIGHT REDUNDANCY 10–18 (Geo. Mason Univ., Working Paper No. 03-03, 2004), *available at* http://www.gmu.edu/departments/law/faculty/papers/docs/03-03.pdf.

127. At a minimum, the costs of duplication of effort must be weighed against the likelihood that we get better results through competition than we would granting one person the right to invent in a particular field. *See* Robert P. Merges, *Rent Control in the Patent District: Observations on the Grady-Alexander Thesis*, 78 VA. L. REV. 359, 381 (1992). Courts and scholars have recognized that races can lead to significant new inventions. *See* Slimfold Mfg. Co. v. Kinkead Indus., Inc., 932 F.2d 1453, 1457 (Fed. Cir. 1991) (Rich, J.) ("Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose."); State Indus. v. A.O. Smith Corp., 751 F.2d 1226, 1236 (Fed. Cir. 1985) ("One of the benefits of a patent system is its so-called 'negative incentive' to 'design around' a competitor's products, even when they are patented, thus bringing a steady flow of innovations to the marketplace."); Matthew J. Conigliaro et al., *Foreseeability in Patent Law*, 16 BERKELEY TECH. L.J. 1045, 1052–53 (2001) ("Generally, pioneering advances provide great leaps in society's collective progress, while technological improvements provide the multitudes of incremental steps necessary to realize the full potential of major, as well as minor, discoveries."); Craig Allen Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1, 40–41 (2000) ("The practice of designing-around extant patents creates viable substitutes and advances, resulting in competition among patented technologies. The public clearly benefits from such activity.").

Indeed, if this were not true, there would be no reason for intellectual property at all; the government could efficiently encourage innovation by granting exclusive rights to work in a particular field. But doing so would merely push rent-seeking back to an earlier stage, causing parties to compete for the exclusive right to prospect. *See* Donald G. McFetridge & Douglas A. Smith, *Patents, Prospects, and Economic Surplus: A Comment*, 23 J. L. & ECON. 197, 198 (1980).

128. John F. Duffy, *The Marginal Cost Controversy in Intellectual Property*, 71 U. CHI. L. REV. 37, 53 (2004); *see also* Barzel, *supra* note 125.

129. Mark S. Nadel, *Why Copyright Law May Have a Net Negative Effect on New Creations: The Overlooked Impact of Marketing*, 19 BERKELEY TECH. L.J. 785, 800 (2004).

130. On the endemic rent-seeking in the copyright process, see, for example, Lemley, *Technology Law*, *supra* note 68; Litman, *supra* note 40; Litman, *Copyright*, *supra* note 68. The result of this process has increasingly been intellectual property statutes with broad grants of rights to intellectual property owners coupled with detailed, narrow carve-outs for vested interests who can successfully lobby to avoid application of the new right to them. *See, e.g.*, 17 U.S.C. §§ 111, 114, 119, 512, 1201 (2000).

intellectual property rights. Indeed, economic theory suggests that private parties will spend up to the total value of the benefit seeking to capture it.[131]

A fourth problem is that enforcement of intellectual property is far from costless. I estimated in 2001 that patent owners and accused infringers spent upwards of $7 billion per year in legal fees related to patent prosecution and litigation alone.[132] Copyright and trade secrets law of course impose additional costs. Other costs—the time spent by courts, legislators, law enforcement officials, and administrative agencies—are subsidized by taxes but are still very real. The benefits of intellectual property in general likely outweigh these costs standing alone. But there are diminishing returns to chasing down externalities in the court system, and at some point the administrative cost of internalization will exceed even the private benefit. Long before that point, the administrative cost will combine with the other costs identified in this subpart to make full internalization socially inefficient.

A final problem is more structural. Even if we believe that investment in innovation is linear, not binary, and that increasing the returns to intellectual property rights will encourage greater investment throughout the range of demand,[133] encouraging this additional investment is probably a bad idea beyond a certain point. As I noted above, the rest of the economy does not operate on the assumption that investors will reap the full social benefit of their investment. Rather, producers generally expect only to cover their marginal costs plus a reasonable return on capital investment. If we create a different rule for intellectual property, one that permits the internalization of social benefits not available with other kinds of property, we will encourage too much investment in innovation relative to other forms of production. This distorts the general economic equilibrium.[134]

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131. *See* Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies and Theft*, 5 W. ECON. J. 224, 226, 232 (1967). Tullock's classic analysis applies to efforts to capture an existing government benefit. The analysis would seem applicable to efforts to create a new right as well. In both cases, rent-seekers will be willing to spend up to their expected value of the rent (the money they will receive if successful, discounted by the probability of failure and any risk aversion) to try to acquire the rent.

132. Lemley, *Rational Ignorance*, *supra* note 113, at 1499–1502.

133. There are good reasons to question this. As noted above, too strong protection may actually discourage some types of innovation. Further, the empirical relationship between patents and investment in research is uncertain at best. John Barton has observed that the growth in the number of patents does not appear to be related to expenditures on research in development or changes in productivity. Indeed, the only strong relationship he can find is between the number of patents issued and the number of patent lawyers. John H. Barton, *Reforming the Patent System*, 287 SCI. 1933 (2000).

134. Glynn Lunney makes this point forcefully. *See* Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 491–92 (1996); *see also* A. C. PIGOU, THE ECONOMICS OF WELFARE 191–92 n.1 (Macmillan & Co. 4th ed., 1978) (1920) ("[I]nventions *may* actually diminish aggregate economic welfare; for they may cause labour to be withdrawn from other forms of productive service to make a new variety of some article to supersede an old one . . . .").

None of this is intended to suggest that intellectual property is a bad idea. Far from it. Rather, the point is that we cannot and should not seek to internalize all positive externalities and prevent "free riding" on intellectual property. Granting intellectual property rights imposes a complex set of economic costs, and it can be justified only to the extent those rights are necessary to provide incentives to create. The economics of intellectual property simply do not justify the elimination of free riding.

D. How Can We Strike the Right Balance?

While it is possible to dispute the magnitude of the costs discussed in the previous subpart, it seems incontrovertible that they are greater than zero. Similarly, it also seems at least highly probable that intellectual property increases innovation and creation relative to a world without intellectual property rights, though it is hard to say by how much. Economic theory tells us that we must balance those rights if we are to achieve efficiency,[135] granting intellectual property rights only to the extent necessary to enable creators to cover their average fixed costs. Anything more does harm and no good.

Economic theory does not, however, give us a very clear answer to the question "how much control is optimal?" The evidence is so ambiguous that Fritz Machlup once famously told Congress that he could not in good conscience recommend either that a patent system be created if one did not exist or that it be eliminated if it already did exist.[136] In fact, George Priest went so far in 1986 as to say that economists could tell lawyers virtually nothing about the appropriate scope of intellectual property rights.[137] The

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135. There are those for whom efficiency is not the goal. But they tend to reject economic analysis altogether, and doubtless have stopped reading well before this point. In any event, my argument is not directed at—and not likely to be persuasive to—them.

136. SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF S. COMM. ON THE JUDICIARY, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM 80 (Comm. Print 1958) (Fritz Machlup); *see also* 8 AREEDA & HOVENKAMP, *supra* note 74, at 154 ("The patent grant is necessarily a gross device that cannot possibly equate social value with reward or the need for additional inventive stimulus, either generally or in particular cases."); Margaret Jane Radin, *Regulation by Contract, Regulation by Machine*, 160 J. INSTITUTIONAL & THEORETICAL ECON. 142, 148 (2004) ("How much propertization is too much? That is an empirical question to which no one knows the answer.").

137. George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property: Comment on Cheung*, 8 RES. L. & ECON. 19, 21 (1986). Priest's concern—the lack of empirical study of intellectual property—rings false today. In the last twenty years, there has been an outpouring of empirical economic work on intellectual property, and the patent system in particular. *See, e.g.*, John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77 (2002); John R. Allison & Mark A. Lemley, *Who's Patenting What? An Empirical Exploration of Patent Prosecution*, 53 VAND. L. REV. 2099 (2000); Barton, *supra* note 133; Bronwyn Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: Determinants of Patenting in the U.S. Semiconductor Industry, 1979–1995*, 32 RAND J. ECON. 101 (2001); Adam B. Jaffe & Manuel Trajtenberg, *International Knowledge Flows: Evidence from Patent Citations*, 8 ECON. INNOV. NEW TECH. 105 (1999); Daniel K. N. Johnson & Vittorio Santaniello, *Biotechnology Inventions: What Can We Learn From Patents?*, *in* AGRICULTURE AND INTELLECTUAL PROPERTY

proliferation of economic literature on intellectual property over the last two decades has improved our understanding of the economics of innovation and intellectual property considerably, but it has not given us a magic bullet or told us where to draw the line between protection and the public domain. Instead, it has taught us that there is no one right answer. The optimal scope, strength, and duration of intellectual property protection depend on the type of creation at issue, on the nature of innovation in the particular industry in question, on the particular kind of invention (and inventor) at issue, and on the market context.[138] They may also depend on the sort of information that is at issue.[139] The problem is further complicated by the fact that we must take into account other means intellectual property owners have of enforcing rights, including government funding, contract, and technological protection.[140] Given this, it is hard—and perhaps even impossible—to ever calibrate intellectual property law perfectly.

The difficulty of drawing the right economic line naturally leads commentators to look for another way out. David McGowan points out the difficulties that utilitarian analysis of intellectual property law faces.[141] He also observes quite correctly that because of the difficulty of doing a proper utilitarian analysis, many people end up falling back on their assumptions or on first principles and simply couching those arguments in utilitarian terms.[142] He also quite rightly suggests that to the extent people are doing so, they should do so openly.[143] McGowan seems dubious that we can ever get utilitarian balancing right, and therefore he himself relies on first principles—in his case, the Lockean notion that having put labor into

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RIGHTS 169 (V. Santaniello et al. eds., 2001); Samuel Kortum & Josh Lerner, *Stronger Protection or Technological Revolution: What is Behind the Recent Surge in Patenting?*, 28 RES. POL'Y 1 (1999); Lemley, *Patent Term*, *supra* note 38; Richard C. Levin et al., *Appropriating the Returns from Industrial Research and Development*, *in* 1987 BROOKINGS PAPERS ON ECON. ACTIVITY 783 (1987); Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MGMT. SCI. 173 (1986); Cecil D. Quillen, Jr. et al., *Continuing Patent Applications and Performance of the U.S. Patent and Trademark Office—Extended*, 12 FED. CIR. B.J. 35 (2002); *see also* WESLEY M. COHEN ET AL., PROTECTING THEIR INTELLECTUAL ASSETS: APPROPRIABILITY CONDITIONS AND WHY U.S. MANUFACTURING FIRMS PATENT (OR NOT) 3–4 (Nat'l Bureau of Econ. Research, Working Paper No. 7552, 2000), *available at* http://www.nber.org/papers/w7552.pdf.

138. For a detailed elaboration of this work and discussion of the literature in the patent context, see DAN L. BURK & MARK A. LEMLEY, TAILORING INNOVATION LAW: SHAPING PATENT POLICY FOR SPECIFIC INDUSTRIES ch. 3 (forthcoming 2005); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).

139. *See* Frischmann, *supra* note 34 (manuscript at 4).

140. *See* MARGARET JANE RADIN, REGIME CHANGE IN INTELLECTUAL PROPERTY: SUPERSEDING THE LAW OF THE STATE WITH THE "LAW" OF THE FIRM 5, 22–23 (Stanford Pub. L. & Legal Theory Working Paper Series, No. 91, 2004), *available at* http://papers.ssrn.com/abstract=534024.

141. McGowan, *supra* note 8.

142. *Id.* at 2–3, 71–72.

143. *Id.*

something, one should own it.[144] Others would fall back on an equally venerable first principle—that competition is the background norm, and granting intellectual property rights are departures from the public domain background that must be justified.[145] Indeed, some have argued that competition itself is a public good that should be treated as a property right.[146] Benjamin Kaplan elevated this principle to the form of a "natural right" as well:

> [I]f man has any 'natural' rights, not the least must be a right to imitate his fellows, and thus to reap where he has not sown. Education, after all, proceeds from a kind of mimicry, and 'progress,' if it is not entirely an illusion, depends on generous indulgence of copying.[147]

On this view, the fact that we can't be sure whether intellectual property rights are necessary or what their proper scope should be means not (as McGowan suggests) that we should presume an entitlement to a property right but that we should deny such an entitlement altogether.

McGowan is surely correct to criticize those who couch in economic terms arguments that really reflect only underlying assumptions rather than economic reasoning.[148] But I think turning to first principles—and therefore shying away from the difficult questions—is a mistake. First, doing so doesn't tell us what to do. The fact that people can draw diametrically opposed conclusions by shifting to different nonutilitarian first principles suggests that we need some way to choose among those principles. If we have given up utilitarian economic analysis, it is not at all clear how we will make that choice, except perhaps by relying on the very preconceived notions and biases against which McGowan warns. Second, and more important, the economic analysis in this subpart suggests that falling back either on a property rights model or on the public domain will get the balance between intellectual property rights and the competitive market wrong. We may not know exactly how to calibrate the right level of intellectual property protection, but we can be reasonably certain that neither "no protection" nor "absolute control over externalities" is the right answer. Hard as it is to get the balance right, we will never do it if we simply stop trying.

We can take some minimum guidance from the likelihood that the relationship between intellectual property protection and innovation is not

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144. *Id.* at 3, 7, 38.

145. On the public domain as a background norm, see, for example, James Boyle, *Fencing Off Ideas: Enclosure & the Disappearance of the Public Domain*, DAEDALUS, Spring 2002, at 13, 16.

146. DINA KALLAY, THE LAW AND ECONOMICS OF ANTITRUST AND INTELLECTUAL PROPERTY: AN AUSTRIAN APPROACH 52–54, 56–60 (2004).

147. BENJAMIN KAPLAN, AN UNHURRIED VIEW OF COPYRIGHT 2 (1967).

148. McGowan, *supra* note 8, at 2–3. I think the solution is to improve the quality of utilitarian analysis and the transparency of argumentation, not to give up on utilitarianism altogether.

monotonic. For the reasons I identified in the previous subpart, adding more and more intellectual property protection not only has diminishing marginal benefits, but at some point has a net negative impact on innovation, because the strengthening of existing rights stifles more new innovation building on those rights than further expansion encourages. Thus, the relationship between the two resembles an inverted "U."

At a bare minimum, increases in intellectual property protection that restrict more innovation than they encourage cannot be economically justified.[149] An obvious example is the retroactive extension of copyright term in the Sonny Bono Copyright Term Extension Act,[150] which provided no new incentive to authors and complicated efforts to make use of a large number of existing works.[151]

In the search for the proper economic balance, the rhetoric of free riding seems unlikely to offer any substantial aid and quite likely to lead us astray. The concept of free riding focuses on the economic effects on the alleged free rider—whether the accused infringer obtained a benefit from the use of the invention, and if so whether it paid for that benefit. But that is not where we should be focusing our attention in calibrating intellectual property. The proper focus is on the intellectual property owner, not the accused infringer. The question is whether an extension of intellectual property rights is necessary to permit intellectual property owners to cover their average fixed costs. If so, it is probably a good idea.[152] If not, it is not necessary, and the likelihood that it will impose costs on competition or future innovation should incline us to oppose it.[153] Whether an accused infringer obtained a benefit without paying for it bears only indirectly on that question. Free

149. A failure to acknowledge this limit is one of the flaws in Polk Wagner's recent argument that we shouldn't worry about ever-increasing control over intellectual property. R. Polk Wagner, *Information Wants to be Free: Intellectual Property and the Mythologies of Control*, 103 COLUM. L. REV. 995 (2003). Wagner argues that since control over intellectual property is imperfect, increasing intellectual property rights will encourage new creation that will have spillover benefits to the public. *Id.* at 1005–08. While this is certainly true up to a point, beyond a certain level of control the costs of marginal increases in control outweigh any such benefits. Wagner simply assumes we have not reached that point. I think there is substantial evidence to the contrary in copyright law.

150. 17 U.S.C. § 302 (2000).

151. For an economic critique of the Act, see *Eldred v. Ashcroft*, 537 U.S. 186, 242–67 (2003) (Breyer, J., dissenting).

152. Not necessarily; it is possible that the costs associated with a particular extension of intellectual property are so great that they outweigh the incentive benefits.

153. Thus, the property/free riding approach has difficulty explaining our instinct that some sorts of creations shouldn't be protected at all, or should at best be given limited protection. By contrast, asking whether a particular class of incentives is necessary allows us to exclude certain types of works, such as government statutes. *Cf.* Shubha Ghosh, *Copyright as Privatization: The Case of Model Codes*, 78 TUL. L. REV. 653, 655–57 (2004) (arguing that courts find it hard to reject protection for public ordinances drafted by private parties because of their focus on property language).

riding encompasses both conduct that simply captures consumer surplus or other uncompensated positive externalities and conduct that reduces the return to the intellectual property owner to such an extent that it cannot cover its costs. Only the latter is of concern, and free riding as a concept will not help us to distinguish the two.

III. Beyond the Property/Free Riding Paradigm

If we are wrong to think of intellectual property rights in terms of free riding, how then are we to think of them? What is the right analogy for intellectual property law? Several possibilities come to mind.

First, it might be possible to rehabilitate the property analogy by disconnecting the concept of property from the arguments against externalities and free riding.[154] As noted above, the economic arguments for property don't justify the full internalization of social surplus as a general matter, but only in the limited circumstances of the tragedy of the commons. The leap from property right to "despotic dominion" is not a universal one. As Carol Rose notes, despotic dominion is a caricature of property rights rather than an accurate description of them.[155] There is a strong body of literature discussing the limits of real property rights and the circumstances in which we either grant restrictive rights to land or hold it open altogether.[156] Some of the literature describing the nuances of property has made it to intellectual property or the internet, where a number of thoughtful scholars applying the property framework have acknowledged the limitations of real property law and looked at how the particular characteristics of intellectual property should affect the construction of the right.[157] It is possible,

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154. Indeed, if Stewart Sterk is correct that "it is far too late to expunge the rhetoric of property from dialogue about copyright," we may have no choice. STEWART STERK, WHAT'S IN A NAME? THE TROUBLESOME ANALOGIES BETWEEN REAL AND INTELLECTUAL PROPERTY 43 (Cardozo Law Legal Studies Research, Working Paper No. 88, 2004), *available at* http://papers.ssrn.com/abstract=575121.

155. Carol M. Rose, *Canons of Property Talk, or Blackstone's Anxiety*, 108 YALE L.J. 601, 631 (1998).

156. *See, e.g.*, ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 23–25 (1990) (arguing for the use of empirical studies in the development of community property allocation models). Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 769 (1986) (recognizing the problem with privatizing real property whose value is based on its nonexclusivity). Tom Grey argued more than two decades ago that the concept of property as a "bundle of rights" meant that property interests were necessarily disaggregated and context-specific. Thomas C. Grey, *The Disintegration of Property*, *in* PROPERTY: NOMOS XXII 69 (J. Roland Pennock & John W. Chapman eds., 1980). Ironically, however, Michael Heller has suggested that the very disaggregation of property rights may lead inexorably to their expansion. Michael A. Heller, *The Boundaries of Private Property*, 108 YALE L.J. 1163, 1191–94 (1999).

157. *See* Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1 (2004); Anupam Chander, *The New, New Property*, 81 TEXAS L. REV. 715, 778–79 (2003) (distinguishing between the property concept itself and the abuse of that concept in the

therefore, to talk of intellectual property as a species of property more generally without applying the inapt economic lessons from different types of property with rather different characteristics.[158] Indeed, since as we have seen, the tragedy of the commons doesn't apply in the intellectual property context, economists who are thinking correctly about the issue will not seek to fully internalize the social benefits of intellectual property merely because we call it a form of property. The key is to think of property so broadly that many different legal regimes can fit under the tent. As Benjamin Kaplan put it,

> To say that copyright is 'property' . . . would not be baldly misdescriptive if one were prepared to acknowledge that there is property and property, with few if any legal consequences extending uniformly to all species *and* that in practice the lively questions are likely to be whether certain consequences ought to attach to a given piece of so-called property in given circumstances.[159]

Clearly these treatments are a step in the right direction. But these nuanced analyses of the variety of possible property rules are the exception,

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internet context); Epstein, *supra* note 57, at 155; Richard A. Epstein, *The Dubious Constitutionality of the Copyright Term Extension Act*, 36 LOY. L. REV. 123, 126 (2002) (noting the problems with merely characterizing copyright as property); Richard A. Epstein, *Intellectual Property: Old Boundaries and New Frontiers*, 76 IND. L.J. 803, 804 (2001) (noting the difficulty in analogizing real property law to intellectual property law); Jacqueline Lipton, *Information Property: Rights and Responsibilities*, 56 FLA. L. REV. 135, 140 (2004) (drawing on traditional property theories to achieve appropriate checks and balances in the context of intellectual property). Both Carrier and Lipton point to the limits the law imposes on real property—easements, servitudes, public trust, adverse possession, and the like—and draw analogies to intellectual property and the internet.

The literature on nuance in property is larger where the internet is concerned. Carol Rose suggests that the internet might be divided into private and public spaces with very different characteristics, sharing different needs. Rose, *supra* note 85, at 154. Many have argued for the creation of public space online, often on a public trust model. *See, e.g.*, Jacqueline Lipton, *Mixed Metaphors in Cyberspace: Property in Information and Information Systems*, 35 LOY. U. CHI. L.J. 235, 239–40 (2003) (sharing the "concerns of the commentators who have criticized the disturbing trend by governments to 'over-propertize' information in the digital age"); Maureen Ryan, *Cyberspace as Public Space: A Public Trust Paradigm for Copyright in a Digital World*, 79 OR. L. REV. 647, 691 (2000) (explaining that the creation of a public space online "has the potential to replace a diminishing physical public space"); Molly S. Van Houweling, *Cultivating Open Information Platforms: A Land Trust Model*, 1 J. TELECOMM. & HIGH TECH. L. 309, 319–21 (proposing the adoption of the land trust model, popular in the environmental conservation arena, to avoid internet protocol pollution). *See generally* LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD 26–48 (2001) (articulating the metaphor of the internet as an "innovation commons").

158. As Anupam Chander colorfully puts it, "[I]f legislatures and courts declared that homeowners could prevent migrating birds from flying overhead, that would not lead us to conclude that homeowners should not have property, but only that the property rights they have" have been defined erroneously. Chander, *supra* note 157, at 778–79. Tony Reese talks about how different conceptions of property rights can lead to different copyright rules in R. Anthony Reese, *Reflections on the Intellectual Commons: Two Perspectives on Copyright Duration and Reversion*, 47 STAN. L. REV. 707 (1995).

159. KAPLAN, *supra* note 147, at 74.

not the rule, in the wave of property-based IP theory and court decisions. Far more common is an assumption that intellectual property is just like real property.[160] With that erroneous[161] assumption has come a second doctrinal leap: a focus on the elimination of externalities, and with them free riders. My worry is that the rhetoric of property has a clear meaning in the minds of courts, lawyers, and commentators as "things that are owned by persons"[162] and that fixed meaning will make it all too tempting to fall into the trap of treating intellectual property as an absolute right to exclude.[163] Further, it is all too common to assume that because something is property, only private and not public rights are implicated.[164] Given the fundamental differences in the economics of real property and intellectual property, the use of the property label may simply be too likely to mislead in practice. And if we have to keep emphasizing how IP isn't like other forms of property, it's not clear how much the label really buys us. As Kaplan continues, "[C]haracterization in grand terms then seems of little value: we may as well go directly to the policies activating or justifying the particular determinations."[165]

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160. Jack Valenti testified before Congress in 1982 that "creative property owners must be accorded the same rights and protection resident in all other property owners . . . ." *Home Recording of Copyrighted Works: Hearings Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the Comm. on the Judiciary House of Representatives on H.R. 4783, H.R. 4794, H.R. 4808, H.R. 5250, H.R. 5488, and H.R. 5705*, 97th Cong., 2d Sess. 65 (1982) (statement of Jack Valenti, President, Motion Picture Association of America, Inc.).

161. Even if intellectual property is reasonably treated as a species of property, for the reasons I have explained it is not "just like" real property.

162. Grey, *supra* note 156, at 69 (emphasis omitted).

163. Thus, Richard Craswell warns that conceiving of rights as property rights may "exert a sort of psychological force that makes some remedies seem more plausible than others." Richard Craswell, *How We Got This Way: Further Thoughts on Fuller and Perdue*, 1 ISSUES IN LEGAL SCHOLARSHIP 1, 12 (2001). As Larry Lessig characterizes the argument, to copyright owners there is no need to balance rights or incentives—we own it, and so we get to stop others from using it. LESSIG, FREE CULTURE, *supra* note 76, at 79.

164. *Cf.* Ghosh, *supra* note 8, at 389 (noting the debate whether "copyright law serves to protect certain essential private property interests or whether copyright law is informed by public, regulatory values"). For this reason, I am skeptical of Chander and Sunder's claim that treating IP as a form of property will increase the focus on the distributional effects of that property. *See* Anupam Chander & Madhavi Sunder, *The Romance of the Public Domain*, 92 CAL. L. REV. 1331, 1354–55 (2004); *see also* BOYLE, *supra* note 87, at 129–30 (making a similar argument in favor of "intellectual property" rights for indigenous tribes in order to generate income that preserves indigenous cultures, their knowledge of potentially beneficial plants, and the habitats in which those plants grow). Whatever property theory may say, the label "property" seems bound up in the public imagination with a conception of ownership that leaves little room for distributional concerns.

165. KAPLAN, *supra* note 147, at 74. Eugene Volokh has suggested to me one answer to this question—that treating intellectual property as property is shorthand for laypeople indicating that this is a right that can be bought, sold, willed, and otherwise disposed of. This is a fair point, though it's not clear how important this function is.

A second alternative is to treat intellectual property as a tort.[166] Unlike property systems, which focus their attention on legally enforceable rights to exclude, tort systems are intended to compensate injured parties. In one sense, treating intellectual property as a form of tort law is consistent with the economic lessons of the previous Parts. A focus on harm to the intellectual property owner, rather than on the benefit conferred on the infringer, is consistent with optimal intellectual property policy. Indeed, in another era we treated intellectual property as a species of business tort, lodging trademarks and trade secrets in the *Restatement of Torts* and including chapters on copyright and patent in tort casebooks.[167]

But the analogy to tort law is far from perfect. Tort law tends to focus on defendant's conduct, assigning blame where the defendant could have acted differently, rather than focusing on the incentives given to plaintiffs. Further, while basic tort principles design the law around compensating plaintiffs for injury, a significant branch of tort law is built around the concept of unjust enrichment.[168] The idea behind unjust enrichment is to recapture—or at least to deny to the tortfeasor—positive externalities or spillovers. As noted above, that focus is inappropriate in an intellectual property case. My fear, therefore, is that drawing too close an analogy to the tort system will encourage the courts to focus attention on how the defendant was enriched, not on the need for compensating intellectual property owners. This would be a move in precisely the wrong direction.

Perhaps the closest legal analogy to intellectual property is a government-created subsidy. Tom Bell analogizes copyright to the welfare system.[169] The point of intellectual property law is to depart from the norm of a competitive marketplace in order for the government to provide a benefit to a private party.[170] This is also the point of the welfare system. The government is not doing so out of largess in either case. Rather, it is acting in order to benefit the public more generally, supporting innovation that might otherwise never occur because the market would undervalue creativity.

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166. For an effort to think of copyright law by analogy to personal injury torts, see Wendy J. Gordon, *Copyright as Tort Law's Mirror Image: "Harms," and "Benefits," and the Uses and Limits of Analogy*, 34 MCGEORGE L. REV. 533 (2003). This approach is relatively rare today. Most modern treatments of intellectual property rights as a tort system involve either efforts to distinguish IP from other torts, or a focus on areas of unfair competition and misappropriation that are at best quasi-intellectual property. *See, e.g.*, Bruce P. Keller, *Condemned to Repeat the Past: The Reemergence of Misappropriation and Other Common Law Theories of Protection for Intellectual Property*, 11 HARV. J. L. & TECH. 401 (1998); A. Samuel Oddi, *Product Simulation: From Tort to Intellectual Property*, 88 TRADEMARK REP. 101, 107–08 (1998).

167. *See* 3 RESTATEMENT OF TORTS §§ 715–740 (1938) (trademarks); 4 RESTATEMENT OF TORTS §§ 757–758 (1939) (trade secrets); 2 JOHN H. WIGMORE, SELECT CASES ON THE LAW OF TORTS app. a §§ 70–98 (1912).

168. *See generally* RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT.

169. Tom Bell has proposed this analogy and evaluated the similarities and differences in great detail. Bell, *supra* note 2, at 235–67.

170. *Id.* at 273–74 (describing copyright as a "statutory entitlement" system).

A similar argument can be made for welfare and other forms of government subsidy, such as education—that they are intervening to help particular people or activities in a way that the market would not in order to produce collateral social benefits.[171] Thinking of intellectual property as government welfare policy has substantial benefits, because it makes it clear that the grant of this government benefit, like any other, no matter how well intentioned, comes with costs and should be implemented only if necessary.[172]

Nonetheless, the analogy has problems. The public has to pay directly for the social benefits of welfare in taxes. By contrast, the subsidies in intellectual property law are mediated through the market—only those who want to buy creative works or inventions are affected, though as a practical matter you would find it difficult to survive in modern society without using a copyrighted or patented product. The fundamental differences between intellectual property rights and other forms of government subsidy have to do with how the recipients of that subsidy are selected and the size of the subsidy determined. While with most government subsidies the government makes both choices, in the case of intellectual property the government leaves those decisions to the very market it is attempting to influence. Because many criticisms of government subsidies focus on size and allocation, they may not apply to intellectual property.[173]

A related formulation is intellectual property as government regulation.[174] Intellectual property is obviously government regulation in the classic neutral sense of that term—government intervention in the free market to alter the outcome it would otherwise produce because of a perceived market failure. Intellectual property *is* a form of government subsidy, designed to influence supply in the market away from the competitive norm just as support from the National Endowment of the Arts, the National Institutes of Health, or crop supports to farmers are.

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171. Indeed, Bell argues that we care for the poor "in part because we aim to enjoy more positive externalities," *id.* at 264, which is precisely what I have argued is the proper goal of intellectual property law.

172. It may also remind us of the fundamental legal realist insight that property rights too are government-created and government-enforced, something that law and economics scholars in particular are inclined to forget. *See generally* Margaret Jane Radin & R. Polk Wagner, *The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace*, 73 CHI.-KENT L. REV. 1295 (1998) (reminding us of this point).

173. That fact may introduce other distortions, however. *See* BOYLE, *supra* note 87, at 35–42 (arguing that the fact that price information is both subject to intellectual property protection and necessary to allocate that protection distorts the functioning of the market).

174. John Duffy has noted the parallels between the economic theory of public utility regulation and intellectual property law. *See* Duffy, *supra* note 128, at 39–41; *see also* MICHAEL GOLDHABER, REINVENTING TECHNOLOGY 214 (1986); LESSIG, FREE CULTURE, *supra* note 76, at 194; SHUBHA GHOSH, PATENTS AND THE REGULATORY STATE: RETHINKING THE PATENT BARGAIN METAPHOR AFTER *ELDRED* (St. Univ. of N.Y., Working Paper, 2004) (suggesting a regulatory view of patent law), *available at* http://papers.ssrn.com/abstract=574141; Tracy Lewis & Eric Talley, *Innovation, Competition and Optimal IP Regulation* (unpublished manuscript, on file with the Texas Law Review) (modeling intellectual property as a form of utility-style regulation).

Recognizing this fact may be useful because it helps us to understand the comparison between this form of subsidy and other sorts of rewards, an area on which there is a burgeoning literature.[175] Further, copyright in particular (and to a lesser extent patent) have become increasingly regulatory in structure, with statutes setting out detailed rules, regulations, and prices for specific uses in specific industries.[176] As Herb Hovenkamp points out,

> Anyone who does not believe that the IP laws are a form of regulation has not read the [statutes] and the maze of technical rules promulgated under them. . . . The range of government estimation that goes on in the IP system is certainly as great as in regulation of, say, retail electricity or telephone service.[177]

Nonetheless, there are some problems with the subsidy and regulation analogies. I am concerned that drawing the analogy to welfare may have a problem similar to the problem with the property story: it brings with it too much baggage. Welfare is not popular, even among liberals, and much legislative effort has been devoted to reducing, reforming, or eliminating it.[178] These efforts may be misguided, but even so welfare has a stigma.[179] To talk about intellectual property in terms of welfare may incline people subconsciously to oppose it, just as talking about property and free riding inclines people to strengthen it. There may also be unconscious bias against government programs characterized as regulations. Regulation is out of vogue, and those who talk about intellectual property as regulation usually do so in order to denigrate it.[180]

None of these analogies is even close to perfect. My fear is that a focus on analogies will mislead more than it enlightens. If there are sufficient dissimilarities between intellectual property and other areas of law, drawing analogies becomes problematic, not only because of the caveats that are required ("intellectual property is like any other tort, except in the following

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175. *See, e.g.*, Michael Abramowicz, *Perfecting Patent Prizes*, 56 VAND. L. REV. 115 (2003); Duffy, *supra* note 128; Michael Kremer, *Patent Buyouts: A Mechanism for Encouraging Innovation*, 113 Q. J. ECON. 1137 (1998); Steven Shavell & Tanguy van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J. L. & ECON. 525 (2001).

176. *See* Joseph P. Liu, *Regulatory Copyright*, 83 N.C. L. REV. 87, 91, 102–29 (2004) (detailing the ways that copyright law has become "increasingly more detailed and industry-specific, relying more on compulsory licenses and, in some cases, mandating adoption of certain technologies and banning others").

177. Herbert Hovenkamp, *Antitrust and the Regulatory Enterprise*, 2004 COLUM. BUS. L. REV. 335, 336–37.

178. A search for "welfare reform" in Westlaw's TP-ALL database on February 3, 2005 yielded 4,571 results, and that's just discussion of the subject among legal periodicals.

179. For example, a popular way to attack government benefits granted to corporations is to deride them as "corporate welfare." *See, e.g.*, RALPH NADER, CUTTING CORPORATE WELFARE (2000).

180. *See* Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 272 (2004) ("In the end, 'exclusive rights' are merely another form of regulation that Congress may, and frequently does, use to confer economic rents on favored special interests.").

ways . . ."), but because those caveats have a way of getting lost over time. This may be what has happened with efforts to talk about intellectual property as a form of property: over time, it is too easy to rely on the shorthand reference to property and come to believe that intellectual property really *is* like other kinds of property.[181]

In the final analysis, I don't know that we need an analogy at all.[182] We have a well-developed body of intellectual property law, and a large and developing body of economic scholarship devoted specifically to intellectual property. The needs and characteristics of intellectual property are unique, and so are the laws that establish intellectual property rights. As the Supreme Court of Canada recognized 25 years ago,

> copyright law is neither tort law nor property law in classification, but is statutory law. It neither cuts across existing rights in property or conduct nor falls in between rights and obligations heretofore existing in the common law. Copyright legislation simply creates rights and obligations upon the terms and in the circumstances set out in the statute.[183]

Intellectual property has come of age; it no longer needs to turn to some broader area of legal theory to seek legitimacy. The economics of intellectual property law should focus on the economic characteristics of intellectual property rights, not on inapposite economic analysis borrowed from the very different case of land.

If we don't need an analogy, maybe we do need a new term. If people think of intellectual property as a form of property because of its name and are misled by the connection, then the name should probably go. But it has built up considerable inertia, and it does capture some of the similarities between the different fields it unites. Further, none of the dozens of alternatives people have suggested to me seem particularly likely to replace "intellectual property" in the public lexicon. So here's a modest suggestion: instead of intellectual property, let's start talking about "IP." Lots of people already use it as a shorthand anyway. And if we are so unhistorical that the use of the term "intellectual property" can make us forget the utilitarian roots of our protection for inventions and creations, perhaps over time we can forget the origins of the abbreviation too.

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181. Richard Stallman suggests that the term "intellectual property" is to blame and that we need a new term, one that both avoids the property connotations and makes it clear that patents and copyrights but not trademarks are included. Richard Stallman, *Did You Say Intellectual Property? It's a Seductive Mirage*, GNU Project, *at* http://www.gnu.org/philosophy/not-ipr.xhtml (last visited Feb. 7, 2005).

182. Dan Hunter and I have written elsewhere on the role of metaphor in organizing human thought, and whether the law can transcend metaphor. Hunter, *supra* note 8; Lemley, *Place*, *supra* note 8; *see also* Michael J. Madison, *Rights of Access and the Shape of the Internet*, 44 B.C. L. REV. 433 (2003). I don't intend to revisit that debate here.

183. Compo Co. v. Blue Crest Music Inc., 1980 S.C.R. 357, 372–73 (Can.).

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