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Courts and scholars have increasingly assumed that intellectual property is a form of property, and have applied the economic insights of Harold Demsetz and other property theorists to condemn the use of intellectual property by others as “free riding.” In this article, I argue that this represents a fundamental misapplication of the economic theory of property. The economics of property is concerned with internalizing negative externalities – harms that one person’s use of land does to another’s interest to it, as in the familiar tragedy of the commons. But the externalities in intellectual property are positive, not negative, and property theory offers little or no justification for internalizing positive externalities. Indeed, doing so is at odds with the logic and functioning of the market. From this core insight, I proceed to explain why free riding is desirable in intellectual property cases except in limited circumstances where curbing it is necessary to encourage creativity. I explain why economic theory demonstrates that too much protection is just as bad as not enough protection, and therefore why intellectual property law must search for balance, not free riders. Finally, I consider whether we would be better served by another metaphor than the misused notion of intellectual property as a form of tangible property.

Property, Intellectual Property, and Free Riding¹

Mark A. Lemley²

Intellectual property protection in the United States has always been about creating incentives to invent. Thomas Jefferson was of the view that “inventions 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.”³ 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.

This fundamental principle is under sustained attack. Congress, the courts and commentators increasingly treat intellectual property as simply a species of real property rather

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³ VI Writings of Thomas Jefferson 180-81 (H.A. Washington ed.), quoted in *Graham v. John Deere Co.*, 383 U.S. 1 (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 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** 152 (Stephen Munzer ed. 2001).

than as a unique form of legal protection designed to deal with public goods problems. They 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 shift to property rights and the rhetoric of free riding is fundamentally misguided. The economic theory of real property is quite properly concerned primarily with the imposition of negative externalities – the imposition of costs on another. This is because real property tends to be a zero-sum environment – if I use a piece of land, you can’t use it.. If I overgraze a commons, that overgrazing imposes costs on anyone else who might use the commons. Property rights prevent the creation of those negative externalities by internalizing the effects of the use of real property. But invention and creation are not zero-sum; far from it. Applying property theory to intellectual property involves the internalization not of negative externalities, but of positive externalities – benefits conferred on another. Real property theorists have not generally confronted the issue of positive externalities. I argue that internalizing positive as opposed to negative externalities is not a proper goal of tangible property rights except in unusual circumstances, for several reasons: because there is no need to fully internalize benefits as there is with harms, because efforts to capture positive externalities may actually reduce them, leaving everyone worse off, and because the effort to capture such externalities invites rent-seeking.

Traditional property theory, then, is ill-suited to the unique characteristics of intellectual property. Efforts to import the principles and rules of real property law into this different context will inevitably get the balance wrong. 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 a more apt description than treating it as real property.⁴

In Part I, I outline the growth of the real property theory of intellectual property, and explain how that theory has influenced courts to focus on free riding and the internalization of externalities. In Part II, I explain why basing intellectual property rights on real property theory is not appropriate and indeed is counterproductive. Finally, in Part III I discuss the alternatives to the real property analogy.

I. The Property Model of Intellectual Property⁵

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.

⁴ Tom Bell is the first to draw this analogy, likening copyright specifically to a particular form of government subsidy: welfare. Tom W. Bell, *Author's Welfare: Copyright as a Statutory Mechanism for Redistributing Rights*, 69 **Brooklyn L. Rev.** 229 (2003).

⁵ Two paragraphs of this section of the article are adapted from my earlier work *Romantic Authorship and the Rhetoric of Property*, 75 **Tex. L. Rev.** 893 (1997), which sought to describe the emergence of the property view 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. 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 part of the problem. 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.⁶ A quick, unscientific search for the term “intellectual property” in federal court opinions by decade shows an almost exponential growth in the use of the term:

Table 1⁷

⁶ 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 art. 2(viii) (Stockholm, July 14 1967 to January 13 1968). 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 “propriete 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”). These uses do not seem to have reflected a unified property-based approach to the separate doctrines of patent, trademark, and copyright, however.

⁷ Westlaw search in FEDCOURTS database conducted April 2, 2004. 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,

<u>Years</u>	<u>Instances of Term “Intellectual Property”</u>
1993-2003	3,863
1983-1993	1,510
1973-1983	555
1963-1973	327
1953-1963	303
1943-1953	201

Those who pay attention to that sort of thing may find this shift in terminology important, or at least symbolic;⁸ certainly the rise of the "property rights" view of intellectual property seems to coincide with the widespread use of the new phrase.⁹ “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.

the differences are fairly dramatic.

⁸ See Bell, *supra* note ___, at 273 (“Rhetoric matters.”).

⁹ To be sure, one can find earlier references to the property analogy. See Mark Rose, **Authors and Owners: The Invention of Copyright** 90 (1993). 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 (2001), 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.

It is this last connection that has proven the most important. As the term “intellectual property” settles over the traditional legal disciplines of 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.¹⁰ In the

¹⁰ Kenneth W. Dam, *Some Economic Considerations in the Intellectual Property Protection of Software*, 24 **J. Legal Stud.** 321, 332 & n.44 (1995); Frank H. Easterbrook, *Intellectual Property is Still Property*, 13 **Harv. J.L. & Pub. Pol'y** 108 (1990); I. Trotter Hardy, *Property in Cyberspace*, 1996 **U. Chi. L.F.** 217; Edmund Kitch, *Patents: Monopolies or Property Rights?*, 8 **Res. L. & Econ.** 31 (1986); Edmund Kitch, *The Nature and Function of the Patent System*, 20 **J.L. & Econ.** 265 (1977); Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 **Vand. L. Rev.** 1727 (2000); Symposium, *Does It Matter Whether Intellectual Property is Property?*, 68 **Chi.-Kent L. Rev.** __ (1993); David McGowan, *Copyright Nonconsequentialism*, 69 **Mo. L. Rev.** 1 (2004); everything by Kieff. 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 intellectual property examples as part of a broader theory of property. [cite Merrill & Smith].

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* (working paper 2004). 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 significance 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 (1996) (speaking of the "privatization" of words and symbols); Shuhba Ghosh, *Deprivatizing Copyright*, 54 **Case W. Res. L. Rev.** 387, 389 (2004); Lemley, *Romantic Authorship*, *supra* note __, at 895-903; Kenneth Port, *The Illegitimacy of Trademark Incontestability*, 26 **Ind. L. Rev.** 519 (1993); Samuelson, *supra* note __, at 397; Robert P. Merges, *Property Rights Theory and the Commons:*

antitrust field, both advocates and critics of 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.¹¹

More important, courts too are increasingly making this assumption. The trend is identified and endorsed by Judge 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 . . . 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. . . . 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.¹²

Most critically, the Supreme Court has increasingly relied on the rhetoric of property rights in

The Case of Scientific Research, 13 **Soc. Phil. & Pol.** 145, 146-47 (1996) (discussing “creeping propertization” in the pure sciences); Arti Rai, Northwestern (same); 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); Pamela Samuelson, *Information as Property: Do Ruckelshaus and Carpenter Signal a Changing Direction in Intellectual Property Law?*, 38 **Cath. U.L. Rev.** 365 (1989). Cf. Dan Hunter, *Cyberspace as a Place and the Tragedy of the Digital Anticommons*, 91 **Calif. L. Rev.** 439 (2003) (noting the effects of analogizing the Internet to real property); Mark A. Lemley, *Place and Cyberspace*, 91 **Calif. L. Rev.** 521 (2003) (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 Dwyer & Peter S. Menell, Property** (Foundation 2000).

¹¹ See **United States Department of Justice and Federal Trade Commission, 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); Hon. Giles S. Rich, *Are Letters Patent Grants of Monopoly?*, 15 **W. New Eng. L. Rev.** 239 (1993) (arguing that intellectual property is just like physical property, and as a result doesn't confer monopoly power, so antitrust scrutiny is inappropriate).

¹² Easterbrook, *supra* note ___, at 109, 112, 118.

treating intellectual property and related cases.¹³

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.¹⁴ 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."¹⁵ Julie Cohen has referred to the tendency of intellectual property owners to assume that their rights are absolute: "a property right delineated as absolute sovereignty over the disposition and use."¹⁶ It has even been suggested that property ownership is hard-wired into our brains.¹⁷

The rise of property rhetoric in intellectual property cases is closely identified not with common law property rules in general, but with a particular economic view of property rights. This view, which emerges from a branch of the law and economics movement, emphasizes the importance of private ownership as the solution to the economic problem known as the "tragedy

¹³ See, e.g., *San Francisco Arts & Athletics, Inc. v. United States Olympic Committee*, 483 U.S. 522 (1987) ("when 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. . . . 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."); *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986 (1984) (trade secrets laws confer a property right which 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 __, at 375-95.

¹⁴ Samuelson, *supra* note __, at 398.

¹⁵ 2 **William Blackstone, Commentaries** *2.

¹⁶ Julie E. Cohen, *Overcoming Property: Does Copyright Trump Privacy?*, 2002 **U. Ill. J. L. & Tech. Pol'y** 375, 379 (2002).

¹⁷ See *id.* ("There is nothing which so generally strikes the imagination, and engages the affections of mankind, as the right of property"); F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 **Calif. L. Rev.** 1, 36 (2004) (noting that even small children exhibit possessiveness over chattels); **Richard Pipes, Property and Freedom** 65-86 (1999) (animals and all human societies show the possessiveness instinct).

of the commons."¹⁸ The central idea here is that joint or public ownership of a piece of property is inefficient, because non-owners who use the property have no incentive to take care of it and will therefore overuse it.¹⁹ 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 from 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.

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.²⁰ Externalities are the problem in the tragedy of the commons, and property rights internalize those externalities.²¹ In his classic work on the economics of property rights, Harold Demsetz argued that property rights are valuable in a society because they limit the creation of uncompensated externalities.²² In a world without transactions 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

¹⁸ Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243, 1244 (1968).

¹⁹ See, e.g., **Carol Rose, Property and Persuasion** 106 (1994).

²⁰ Externalities were certainly known before Demsetz, though discussion of the problem in Pigouvian terms tended to focus on taxes and subsidies.

²¹ 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).

²² 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.”).

it more.²³ Once transactions 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.²⁴ He cites several examples of commons that were converted into property rights once the problem of overhunting became acute – that is, once the negative externalities associated with hunting grew sufficiently large to justify the transactions costs of creating a property rights regime.²⁵

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;²⁶ 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.²⁷ Absent those externalities, the justification for restricting the property right disappears.²⁸ Demsetz acknowledged this too,²⁹ and went on to observe that

²³ *Id.* at 349.

²⁴ *Id.* at 350 (“property 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).

²⁵ *Id.* at 350-53.

²⁶ *See, e.g.*, Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 *Va. L. Rev.* 965, 965 (2004); Daniel C. Esty, *Environmental Protection in the Information Age*, 79 *N.Y.U. L. Rev.* 115, 150 (2004).

²⁷ *See City of Renton v. Playtime Theatres*, 475 U.S. 41 (1986) (justifying prohibition of nude dancing based on secondary neighborhood effects).

²⁸ Thus, in *Voyeur Dorm, LLC 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

creating property rights makes it easier to negotiate over the creation of such negative externalities, reducing the need for regulation.³⁰

Further support for the externality-reducing function of property law comes from those who apply a strong form of the Coase theorem.³¹ If one 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.³² 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.

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 an exponential growth pattern quite similar to that of intellectual property, though perhaps slightly predating it.

Table 2³³

Years

Instances of Term “Free Rider” or “Free Riding”

to remote users.

²⁹ Demsetz, *supra* note ___, at 356 (“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.”).

³⁰ *Id.* at 356-57.

³¹ See Ronald S. Coase, *The Problem of Social Cost*, 3 **J. Law & Econ.** 1 (1960).

³² *Id.* Coase himself never really believed this; he set up the zero transactions costs model to make a point. But the idea has taken on a life of its own, and is generally attributed to him.

³³ Westlaw search in FEDCOURTS database conducted April 27, 2004. The same disclaimers apply – this doesn’t purport to be a scientific study.

1993-2003	243
1983-1993	232
1973-1983	87
1963-1973	20
1953-1963	26
1943-1953	3

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 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.³⁴ To be efficient, logic would seem to suggest, we must eliminate free riding.³⁵

³⁴ 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 (1988); **Richard Posner, *Economic Analysis of Law* 295-96 (4th ed. 1992).**

³⁵ 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); Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 **Yale L.J.** 1533 (1993); Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 **Va. L. Rev.** 149 (1992). 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

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,³⁶ the implications are obvious. The way to get private parties to invest efficiently in innovation is to give them exclusive ownership rights in what they produce.³⁷ The lessons from the economics of property rights seem clear: confer strong property rights on intellectual property creators, encouraging them to invest efficiently in identifying, developing, and commercializing new inventions and managing the inventions they have already made.³⁸ If the social value of innovation exceeds the private value, as apparently it does (or at least did in the early 1980s),³⁹ that simply means we don't have strong enough

that has given a gift, and that propertization may reduce creation of this sort).

³⁶ The clearest example is Kitch, *supra* note __, at 270-71, 275, 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. *See also* Dam, *supra* note __, at __; F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 **Minn. L. Rev.** 697 (2001). Demsetz himself devoted less than a paragraph to intellectual property, concluding that it was "closely analogous" to his land examples and that "the relevant variables are identical." Demsetz, *supra* note __, 359.

On the other hand, William Landes & 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); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 **J. Legal Stud.** 325, 326 (1989). 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).

³⁷ Indeed, Brett Frischmann notes that "at times, nonrivalry [the public goods characteristic of intellectual property] seems inextricably linked to nonexcludability and the associated risk of free riding." Frischmann, *supra* note __, at 19.

³⁸ 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 (2004).

³⁹ *See Morton I. Kamien & Nancy L. Schwartz, Market Structure and Innovation* (1982); Edwin Mansfield et al., *Social and Private Rates of Return From Industrial Innovations*, 91 **Q. J. Econ.** (1977). For more recent data, see Charles I Jones & John C. Williams, *Measuring the Social Return to R&D*, 113 **Q. J. Econ.** 1119 (1998).

property rights, and too many people are free riding on the investments of innovators.⁴⁰ 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.

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,⁴¹ the number of things that are copyrightable has increased, it is easier to qualify for copyright protection,⁴² copyright owners have broader rights to control uses of their works,⁴³ and penalties are harsher.⁴⁴ In addition, Congress has created entirely new rights.⁴⁵ 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

⁴⁰ Joseph Farrell & Carl Shapiro, *Intellectual Property, Competition, and Information Technology* [draft at 18] (working paper 2004).

⁴¹ 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. Congress also changed the patent term from 17 years from issue to 20 years from filing, 35 U.S.C. §154(a), a change prior work has found adds patent term for the majority of patentees. Mark A. Lemley, *An Empirical Study of the Twenty-Year Patent Term*, 22 *AIPLA Q.J.* 369 (1994).

⁴² See Ghosh, *Deprivatizing*, *supra* note ___, at 390 (noting the various types of works copyright has expanded to cover).

⁴³ See generally Jessica Litman, *Copyright Legislation and Technological Change*, 68 *Or. L. Rev.* 275 (1989).

⁴⁴ 17 U.S.C. §505, 506.

⁴⁵ See, e.g., Semiconductor Chip Protection Act, 17 U.S.C. § 901 et seq.; Digital Millennium Copyright Act, 17 U.S.C. § 1201 et seq.; Vessel Hull Design Protection Act, 17 U.S.C. § 1301 et seq.; 17 U.S.C. § 1101 et seq. (creating anti-bootlegging right); Federal Trademark Dilution Act, 15 U.S.C. § 1125(c); Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d).

exploitation and to avoid overuse.”⁴⁶ 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 whether consumers will be confused or search costs increased.⁴⁷ Courts and commentators increasingly speak of trade secrets as property rights, not simply rights to prevent tortious acts that breach standards of business ethics.⁴⁸ And notwithstanding Supreme Court statements distinguishing the two,⁴⁹ they regularly refer to copyrights as property.⁵⁰

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.⁵¹ They justify property-like protection for trademarks on the basis that it will avoid free riding.⁵²

⁴⁶ William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 **U. Chi. L. Rev.** 471, 475 (2003).

⁴⁷ 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).

⁴⁸ The United States 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).

⁴⁹ *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.”).

⁵⁰ See, e.g., *Feltner v. Columbia Pictures Television*, 523 U.S. 340 (1998) (“Actions for damages for infringement of common-law copyright, like actions seeking damages for invasions of other property rights, were tried in courts of law . . .”).

⁵¹ “Free-riding . . . may be a pejorative description of copying, but it is still copying.” 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). In *Lowry’s Reports v. Legg Mason*, 271 F. Supp. 2d 737 (D. Md. 2003), the court relied on this equation to find that a state law targeting free riding was preempted as equivalent to copyright.

⁵² *Adidas-Salomon AG v. Fitnessworld Trading Ltd.*, [2003] 1 C.M.L.R. ___, Case C-408/01,

They find innovative uses of trademarks by non-competitors to be free riding because they make money by “trading on the goodwill” of the trademark owner.⁵³ They debate the proper role of patent law’s doctrine of equivalents in terms of whether it permits free riding.⁵⁴ 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.⁵⁵ The database protection bill pending in Congress at this writing expressly conditions liability on loss occasioned by “the ability of other parties to free ride on the efforts of the plaintiff.”⁵⁶ 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.⁵⁷ Even the courts that reject intellectual property claims do so because they cannot

¶¶37-40.

⁵³ 1-800 Contacts, Inc. v. WhenU.com, 2003 WL 22999270 (S.D.N.Y. Dec. 22, 2003); *see also* Playboy Enters., Inc. v. Netscape Communications Corp., 354 F.3d 1020 (9th Cir. 2004). *Cf.* Nissan Motor Corp. v. Nissan Computer Co., 2004 WL 1753289 (9th Cir. Aug. 6, 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 Ent. Corp.*, 174 F.3d 1036 (9th Cir. 1999) and *Promatek Indus., 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* [draft at 46] (working paper 2004). Similarly, Vincent Chiapetta has referred to “mark free riding” and proposed that the law should “internaliz[e] the returns on the seller’s ‘goodwill.’” Vincent Chiapetta, *Trademarks: More Than Meets the Eye*, 2003 U. Ill. J. L, Tech. & Pol’y 35, 51. For an argument that this approach is inconsistent with the goals of trademark law property understood, see Stacey L. Dogan & Mark A. Lemley, *Trademarks, Search Costs, and the Internet* (working paper 2004).

⁵⁴ Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 538, 627 (Fed. Cir. 2000) (en banc) (Linn, J., dissenting), *rev’d*, 535 U.S. 722 (2002).

⁵⁵ Morris Comms. Corp. v. PGA Tour Inc., 364 F.3d 1288 (11th Cir. 2004).

⁵⁶ H.R. 3261 (108th Cong., 2d Sess.) §3(a)(3) (2004).

⁵⁷ Nat’l Basketball Ass’n v. Motorola, Inc., 105 F.3d 841, 843 (2d Cir. 1997) (holding

find evidence of free riding.⁵⁸

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.⁵⁹ 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. Positive Versus Negative Externalities

The drive to eliminate free riding is based on a fundamental misapplication of the economic framework set out by Harold Demsetz. Demsetz’s classic economic theory is

that “transmission of real-time NBA game scores” via Motorola’s pagers “did 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.

⁵⁸ See, e.g., *Ty, Inc. v. Perryman*, 306 F.3d 509, 512 (7th Cir. 2002).

⁵⁹ See Litman, *supra* note __; Jessica D. Litman, *Copyright, Compromise, and Legislative History*, 72 *Cornell L. Rev.* 857 (1987); Mark A. Lemley, *The Constitutionalization of Technology Law*, 15 *Berkeley Tech. L.J.* 529, 532 (2000) (“it 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 in recent years seems to have abdicated its role in setting intellectual property policy to the private interests who appear before it.”). On the role of interest group pressure in driving propertization more generally, see Saul Levmore, *Two Stories About the Evolution of Property Rights*, 32 *J. Legal Stud.* S421 (2002). Cf. Peter S. Menell, *Envisioning Copyright Law’s Digital Future*, 46 *N.Y.L. Sch. L. Rev.* 63 (2003) (suggesting that Congress is increasingly delegating the setting of digital copyright rules to the

premised on the value of property rights as tools for internalizing *negative* externalities.⁶⁰ Multiple users of a common impose costs on each other; giving control of the common to a single owner ensures that that owner pays the full cost of her use of the property.⁶¹ Similarly, environmental and land use regulations are – at least if done properly – designed to force a property owner to internalize the full cost of a particular use of that property. Ensuring that the owner pays the full cost in turn promotes market efficiency. A competitive market is premised on the assumption that participants will produce goods up until the point that the price they can obtain for those goods drops below the cost of production.⁶² If a property owner isn't paying the full cost of production – if she can raise animals on someone else's land, or make computers more cheaply by dumping toxic waste products elsewhere – she will overproduce the good in question.

At first glance, free riding seems to be the flip side of the tragedy of the commons – one party benefits from another's use of land without compensating the other for that benefit.⁶³ It does not follow, however, that because we are right to try to internalize negative externalities we

parties with concentrated interests in those rules)

⁶⁰ It is true that Demsetz spoke of the internalization of externalities generally. But his examples are all ones that involve the internalization of costs, not benefits. Demsetz, *supra* note ___, at 350-53. And when he explained the problems with a commons, it was always in terms of uncompensated costs rather than benefits. *See, e.g., id.* at 355 (“Communal property results in great externalities. The full *costs* of the activities of an owner of a communal property right are not borne directly by him, nor can they be called to his attention easily by the willingness of others to pay him an appropriate sum.”). The only exception is intellectual property, which Demsetz dismissed as “closely analogous” to land and did not analyze further. *Id.* at 359.

⁶¹ *See also* **David Friedman, Law's Order** 115 (2000) (noting that property is justified because “you and I cannot simultaneously drive the same car to different places . . . We need some way of deciding who gets to use what when.”). In short, my use of a piece of property imposes costs on you by restricting your ability to use it.

⁶² *See* **Paul A. Samuelson, Economics** 39-40 (11th ed. 1980).

⁶³ *See* Frischmann, *supra* note ___, at ___ (noting the tendency to equate the two).

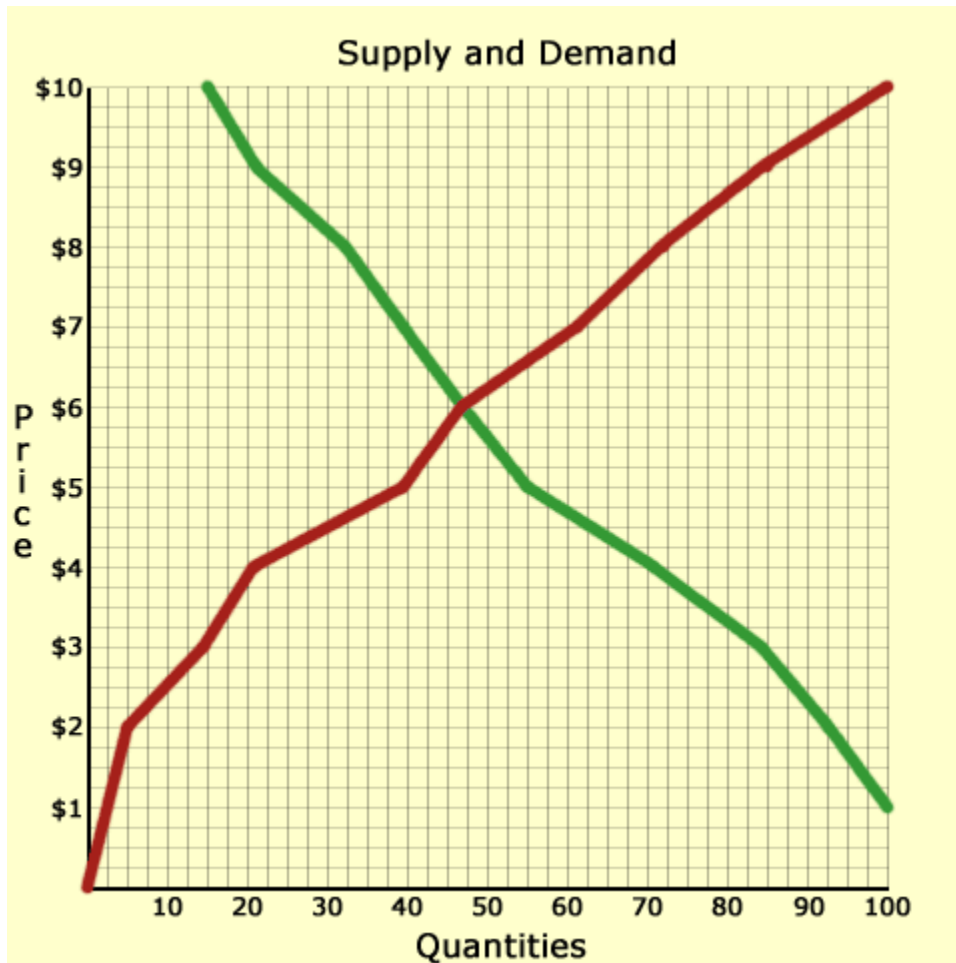
should be similarly preoccupied with internalizing *positive* externalities. In a market economy, we care only that producers make enough return to cover their costs, including a reasonable profit.⁶⁴ So long as that cost is covered, the fact that consumers value the good for more than the price, or that others also benefit from the goods produced, is not considered a problem. Indeed, it is an endemic part of the market economy. The very concept of “consumer surplus” in economics presupposes uncompensated positive externalities in the market for production.⁶⁵ I may be willing to pay \$100 for a copy of “Hamlet,”⁶⁶ but I don’t have to – producers will compete to sell it to me for far less. 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.

⁶⁴ *Id.* at 412; Friedman, *supra* note __, at 115 (“You will make something only if its value . . . is at least as great as the cost of making it.”).

⁶⁵ Samuelson, *supra* note __, at 413 (“there is always a sort of gap between total utility and total market dollar value. This gap is in the nature of a *surplus*, which we consumers get because we ‘receive more than we pay for.’”).

⁶⁶ 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.

Figure 1



Indeed, if we were concerned with internalizing positive externalities in the market, 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. Property theorists once took precisely this approach, seeing competition as a nuisance courts should enjoin.⁶⁷ We don't draw any such conclusion today, of course. Quite the contrary

⁶⁷ See, e.g., Morton J. Horowitz, *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

– antitrust law is devoted to preserving consumer surplus by favoring competition over monopoly,⁶⁸ and economists treat property as welfare-enhancing precisely because it facilitates the development of markets.

Tangible property law too implicitly recognizes the distinction between positive and negative 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.⁶⁹ But property law doesn't give me a right to track them down and charge them for the privilege⁷⁰ - though owners of property once

such case in the United States, the *Charles River Bridge* case, see Raymond Shih Ray Ku, *Copyright, the Constitution and Progress* [draft at 18-19, 29] (working paper 2004) (noting that in that case “the investors argued that the opportunity to transport people across the river was no different than ownership of land. Only the current landowner could exploit that land,” and similarly only the first to build a bridge across a river should be permitted to transport people across).

⁶⁸ See **Robert W. Bork, *The Antitrust Paradox: A Policy At War With Itself*** (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: An Economic Perspective*** (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.

⁶⁹ See **VIII Philip Areeda & Herbert Hovenkamp, *Antitrust Law*** ¶1613b, at 153.

⁷⁰ See *Entick v. Carrington*, 95 Eng. Rep. 807 (K.B. 1765) (“the eye cannot by the laws of England be guilty of a trespass.”); *Boyd v. United States*, 116 U.S. 616, 628 (1886) (adopting English view).

Admittedly, one reason this might be so in the example I have chosen is that the transactions costs of finding potential passers-by and setting a price with them ex ante would be quite high. See *id.* (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*** 51-52 (2d ed. 1989); Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 **Harv. L. Rev.** 1088 (1972). 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 two neighbors who can see into my back yard, for instance. Cf. Demsetz, *supra* note __, 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

tried to obtain such a right.⁷¹ 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 commercial 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 compensate for these positive externalities seems faintly preposterous. Positive externalities are everywhere. We couldn't internalize them all even if we wanted to.⁷² Areeda and Hovenkamp offer numerous examples 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.”⁷³ And as noted above, there is no reason we should particularly want to do so. If “free riding” means merely obtaining a benefit from another's investment, the law does not, cannot, and should not prohibit it. If the marginal cost of benefitting from a use is zero, prohibiting that use imposes unnecessary social costs.

Planting trees is a good example of the disconnect between positive and negative

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 (1980).

⁷¹ *See* Lawrence Lessig, *Free Culture* 33-34 (2004) (discussing the free riding arguments offered by property owners in the Nineteenth Century that they were entitled to prevent photographs of their property).

⁷² *See* Wendy Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 **Va. L. Rev.** 149, 167 (1992) (“A culture could not exist if all free riding were prohibited within it.”).

⁷³ **Areeda & Hovenkamp**, *supra* note ___, at 153.

externalities. Governments almost never restrict the planting of trees, an act that generally confers only positive externalities. When they do regulate it, it is usually because in a particular context it causes negative externalities, by blocking another's view or interfering with power lines. By contrast, governments often do regulate the cutting down of trees, even on private property, because doing so can have long-term negative effects on the environment.

Property theory has not generally focused on the distinction between positive and negative externalities.⁷⁴ Indeed, Demsetz himself didn't do so – he referred to externalities generally, even though all his examples involved negative externalities. One reason for this might be that the most significant externalities to be found in a common are negative ones, and so “internalizing externalities” seems a good shorthand description for the function of property law.⁷⁵ Consumption of real property and chattels is generally rivalrous, so my use of a common or of someone else's property generally does impose a cost on others. But if we are precise, we must acknowledge that Demsetz's economic theory of property justifies only the internalization of negative externalities, not positive ones.

There is 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. This is part of the

⁷⁴ In addition to Demsetz and Hardin, already discussed, see Armen A. Alchian, *Some Economics of Property Rights*, 30 *II Politico* 816 (1965) (measuring public against private ownership by focusing on the internalization of costs – that is, negative externalities).

⁷⁵ The exception to this involves infrastructure, which as Brett Frischmann notes generates significant positive externalities. Brett Frischmann, *An Economic Theory of Infrastructure and Sustainable Infrastructure Commons* [draft at 6] (working paper 2004). 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.

classic definition of a public good.⁷⁶ It is not true of all property or all types of investments, but only a subset. 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 benefit of the mall by charging rent to tenants who will share in the positive benefits of proximity to other stores.

Importantly, unlike the case of negative externalities, 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).

The story of externalities in tangible property, then, is asymmetric. It is important to

⁷⁶ See Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 **Stan. L. Rev.**

internalize all negative externalities, at least up to the point where the transactions costs of doing so exceed the size of the externality, because negative externalities will affect production decisions. By contrast, 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.

B. Lessons for Intellectual Property

In intellectual property, unlike real or personal property, virtually all of the externalities are positive.⁷⁷ 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 a “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.⁷⁸ Precisely because its consumption is nonrivalrous, information does not present any risk of the tragedy of the commons. It simply cannot be “used up.”⁷⁹

1329 (1987) (discussing the characteristics of public goods).

⁷⁷ See Francois Leveque & Yann Meniere, **The Economic Analysis of Patents and Copyrights: A Primer** 223 (2004).

⁷⁸ See Robert P. Merges et al., **Intellectual Property in the New Technological Age** 15-16 (3d ed. 2003).

⁷⁹ See, for example, James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 **L. & Contemp. Probs.** 33, 41 (Winter/Spring 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.”).

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.⁸⁰

The result is that rather than a tragedy, an information commons is a “comedy” in which everyone benefits.⁸¹ The notion that information will be depleted by overuse simply ignores basic economics.⁸²

The lessons of the previous section 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. Rather, because the use of those ideas or words does no harm to their creator, it does not create the sort of negative externality with which property theory tells us we should be concerned.⁸³

⁸⁰ See Harold Smith Reeves, *Property in Cyberspace*, 63 **U. Chi. L. Rev.** 761, 785 (1996).

⁸¹ See **David Bollier, *Silent Theft: The Private Plunder of Our Common Wealth*** 37 (Routledge 2002) (collecting references to the “comedy” or “cornucopia” or “inverse” commons that occurs with non-depletable information); Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 **Minn. L. Rev.** 129 (1998); 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, “nonrivalry opens the door to much more than free riding.” Frischmann, *supra* note __, at [draft 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 (Teubal et al., eds., 1996).

⁸² See Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 **U. Chi. L. Rev.** 129 (2004).

⁸³ From an economic perspective, therefore, it makes sense to distinguish positive and negative externalities in intellectual property. *But cf.* Wendy J. Gordon, *Of Harms and Benefits: Torts, Restitution, and Intellectual Property*, 21 **J. Legal Stud.** 449-82 (1992) (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

Information goods create only positive externalities, and there is no general reason to worry about uncompensated positive externalities.⁸⁴ 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.⁸⁵

generally James Boyle, Shamans, Software and Spleens (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 precisely 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 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.

⁸⁴ 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 __, at 359. For the reasons explained in the text, Demsetz is simply wrong in this passage to equate intellectual property and land. It is also worth noting that while he acknowledges the role of internalization of positive externalities in justifying intellectual property, it is a rather indirect form of negative externality – the effect on makers of obsolete goods – with which he concerns himself.

⁸⁵ See, e.g., Bell, *supra* note __, at 264-65 (“copyright 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 (1995); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736 (2002) (“patent 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.”).

Courts that subscribe to the rhetoric of property and free riding miss this point. In *Register.com v. Verio*,⁸⁶ for example, the court held that the defendant violated the law by accessing Internet WHOIS data on plaintiff's Web site, even though WHOIS data is by the design of the Internet free for anyone to use. The court analogized the defendant to someone who had taken an apple from a tree on plaintiff's property.⁸⁷ In fact, however, because information rather than tangible goods were at stake, and so the plaintiff was not in fact deprived of anything,⁸⁸ 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" a look, and the equities seem rather different.⁸⁹ 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 that must be made before production, and variable or marginal costs that 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

⁸⁶ 356 F.3d 393 (2d Cir. 2004).

⁸⁷ *Id.* at 401-02.

⁸⁸ 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 ___.

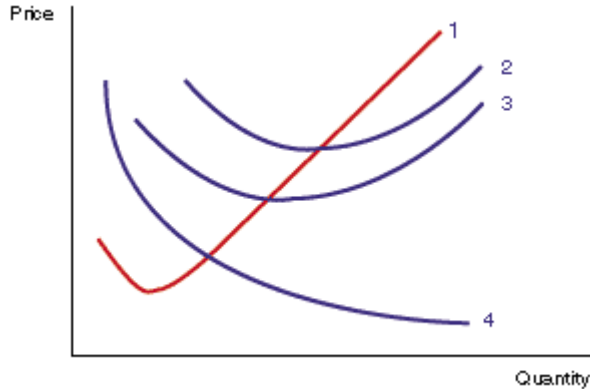
⁸⁹ I am indebted to Brett Frischmann for this example.

investments. Information is different from ordinary goods because the marginal cost of reproducing it is so low.⁹⁰ 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 – in either event the *ratio* of fixed to marginal costs is much higher 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.⁹¹ Figure 2 demonstrates the problem by comparing average fixed and average variable costs in a typical industry and in an information industry. In a typical industry, the average variable cost is represented by line 1. Because variable costs increase, over the range of production average total costs will too (lines 2 and 3). 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, the average variable cost is zero or close to it, and the average total cost curve therefore declines over the entire range of market demand (line 4). The producer of such an information good minimizes its average total costs by selling throughout the full range of market demand.

⁹⁰ 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.

⁹¹ 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). As the marginal cost of distribution falls to zero, the ratio of fixed to marginal costs approaches infinity, making the risk that a creator will not be able to recover his fixed costs greater.

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.⁹² 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.⁹³

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.⁹⁴ If we assume that it is nearly costless to distribute information to others -- an assumption that was once unrealistic but has become much more reasonable with the

⁹² The argument in the next two paragraphs is derived from Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 **Tex. L. Rev.** 989 (1997).

⁹³ 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.

⁹⁴ 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 (NBER 1962).

development of the Internet -- it will prove virtually impossible to charge enough for information to recoup any by 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 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.⁹⁵

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.⁹⁶ If property law is the creation of barriers to entry, as Demsetz suggests, the

⁹⁵ 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.

⁹⁶ See Julie E. Cohen, *Lochner in Cyberspace: The New Economic Orthodoxy of 'Rights Management,'* 97 **Mich. L. Rev.** 462, 495-515 (1998); Arnold Plant, *The Economic Theory Concerning Patents for Inventions*, in **Selected Economic Essays and Addresses** 36 (Arnold Plant ed. 1934). Landes and Posner disagree, arguing that "information is a scarce good, just like land." **Landes & Posner**, *supra* note ___, 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 text, there are important differences between the two.

question is whether those barriers are properly scaled to the problem.⁹⁷ But the “problem” of intellectual property differs fundamentally from the problem of real property law. It is the problem of internalizing positive rather than negative 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.⁹⁸ Examples might include songs or art works that cast Barbie in a light that Mattel – and perhaps young girls – find unfavorable.⁹⁹ While such negative externalities are possible, they seem unlikely to significantly affect the analysis above or to serve as a justification for intellectual property rights in general, for a variety of reasons I have explained elsewhere.¹⁰⁰

⁹⁷ Harold Demsetz, *Barriers to Entry*, 72 **Am. Econ. Rev.** 47, 49, 52 (1982).

⁹⁸ See Justin Hughes, *Recoding Intellectual Property and Overlooked Audience Interests*, 77 **Tex. L. Rev.** 923 (1999); William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 **U. Chi. L. Rev.** 471 (2003).

⁹⁹ See, e.g., *Mattel, Inc. v. MCA Records, Inc.*, 296 F.3d 894 (9th Cir. 2002) (permitting song to parody Barbie); *Mattel, Inc. v. Walking Mountain Productions*, 353 F.3d 792 (9th Cir. 2003) (permitting artist to parody Barbie).

¹⁰⁰

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

How do the implications of my approach differ from the externalities/free riding argument I rejected in the previous section? 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 expenses. Sufficient incentive, as Larry Lessig reminds us, is something less than perfect control.¹⁰¹ Economic theory offers no justification for awarding creators anything beyond what is necessary to recover their average fixed costs. The question is whether, as Landes and Posner put it, “making intellectual property excludable creates value.”¹⁰² 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

contexts. So to do the works of Shakespeare, Frankenstein, Dracula, Scrooge, Uncle Sam and King Arthur. Hughes, *Recoding*, *supra* note __, 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 __, 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 Suellentrip, *Garfield: Why We Hate the Mouse But Note the Cartoon Copycat*, <http://slate.msn.com/toolbar.aspx?action=print&id=2102299> (June 11, 2004) (documenting how the creator of *Garfield* takes steps to avoid public backlash).

¹⁰¹ Lawrence Lessig, *Intellectual Property and Code*, 11 **St. John’s J. Legal Comm.** 635 (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).

¹⁰² **Landes & Posner**, *supra* note __, at 379.

free riding – are too broad because they don’t distinguish between uses that interfere with necessary incentives to create and uses that do not.¹⁰³

One other way in which this economic analysis differs from the property analysis is that incentives cannot justify intellectual property rights in trademarks or the right of publicity.¹⁰⁴ The economic support for those laws must be found elsewhere, in efforts to reduce consumer search costs, avoid confusion, or protect privacy,¹⁰⁵ or perhaps in the rare case of 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.¹⁰⁶

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, while you have shown there is no *need* to grant such control, you haven’t shown there is anything wrong with giving creators greater control over positive externalities. Wouldn’t it be

¹⁰³ See Richard A. Posner, *Misappropriation: A Dirge*, 40 **Hous. L. Rev.** 621, 625 (2003). See also *id.* at 638 (“the unauthorized use of another’s intellectual property, unlike the unauthorized use of another’s physical property, lacks normative significance.”).

¹⁰⁴ 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).

¹⁰⁵ Stacey Dogan I have argued elsewhere that these rationales, not a property rights rationale, in fact justify both trademark law and the right of publicity. Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 43 **Hous. L. Rev.** ___ (forthcoming 2004); Stacey L. Dogan & Mark A. Lemley, *What the Right of Publicity Can Learn From Trademark Law* (vaporware 2004).

easier just to treat intellectual property rights as absolute?

There are a number of costs to granting overbroad intellectual property rights. Because these arguments are well known in the literature, I will detail them only briefly here. These costs fall into four 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. Finally, overinvestment in research and development is 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.”¹⁰⁷

Not every intellectual property right will have this effect, of course. Most rights don’t confer any significant power over price. Indeed, most patents are never enforced or licensed.¹⁰⁸ But they are not the important ones. The intellectual property rights that spur creativity do so precisely because they give their owner a return in excess of marginal cost. And in doing so, they also risk the costs I discuss in this section. 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,

¹⁰⁶ Stephen L. Carter, *Owning What Doesn’t Exist*, 13 **Harv. J. L. & Pub. Pol’y** 99 (1990).

¹⁰⁷ Friedman, *supra* note __, at 135.

¹⁰⁸ See Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 **Nw. U. L. Rev.** 1495 (2001) (estimating that no more than 5% of all patents are licensed).

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.¹⁰⁹ Indeed, few are. But it does mean that consumers who are willing to pay more than it costs to make a copy of a work will be denied access to that work.¹¹⁰ 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 rights.¹¹¹ This inefficiency is well established in the literature on

¹⁰⁹ See 1 **Herbert Hovenkamp et al., IP and Antitrust** § 4.2 (2004 edition) (noting that intellectual property rights generally don't confer market power for antitrust purposes).

¹¹⁰ See, e.g., Einer Elhauge, *Defining Better Monopolization Standards*, 56 **Stan. L. Rev.** 253, 296 (2003) (“from 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 . . .”).

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, e.g., 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).

¹¹¹ Christopher Yoo has argued that intellectual property rights should be modeled as examples of monopolistic competition, and 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. Christopher S. Yoo, *Copyright and Product Differentiation*, 79 **N.Y.U. L. Rev.** 212 (2004). In effect, Yoo's monopolistic competition model encourages rent seeking by deliberately overrewarding 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, 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. The broader the scope of an intellectual property right, the less room there is for new innovators to develop and market new products. Further, increasing the strength of intellectual property rights has diminishing returns in terms of encouraging marginal inventions, and increasing costs to consumers. It may also lead to inefficient near-homogeneity among products.

intellectual property economics.¹¹²

A second cost to strong intellectual property protection is dynamic. Inventions are not created in a vacuum.¹¹³ 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 competition¹¹⁴ – there is substantial evidence that at least in some industries competition is a stronger spur to innovation.¹¹⁵ The argument is that “possession of

See Avnish Dixit & Joseph Stiglitz, *Monopolistic Competition and Optimum Product Diversity*, 67 *Am. Econ. Rev.* 295 (1977). Thus, Yoo’s model does not suggest there is no tradeoff between encouraging invention and static consumer welfare.

¹¹² See, e.g., **William Nordhaus, *Invention, Growth and Welfare: A Theoretical Treatment of Technological Change*** (1969); Scherer, *supra* note __, at 450-51 (documenting patent holders pricing in excess of cost). For a discussion of the literature, see Lemley, *Economics of Improvement*, *supra* note __, at 996-97.

¹¹³ Well, actually, some are. Cf. 35 U.S.C. § 105 (governing inventions made in outer space). But not in a *metaphorical* vacuum.

¹¹⁴ The classic argument cited in favor of monopolists coordinating innovation is **Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy*** 100–02 (Harper 2d ed 1947).

¹¹⁵ See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in National Bureau of Economic Research, **The Rate and Direction of Inventive Activity: Economic and Social Factors** 609, 620 (Princeton 1962) (concluding that “preinvention monopoly power acts as a strong disincentive to further innovation”). See also **Morton I. Kamien and Nancy L. Schwartz, *Market Structure and Innovation*** (Cambridge 1982) (discussing various theories of the effects of economic structures on the rate and form of innovation); **F.M. Scherer and 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).

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.”¹¹⁶ Further, giving an original inventor control over the search for subsequent improvements leaves improvers vulnerable to bargaining breakdown, strategic behavior, or valuation error.¹¹⁷ 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

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 and 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); Arti Kaur Rai, *Evolving Scientific Norms and Intellectual Property Rights: A Reply to Kieff*, 95 **Nw U L Rev** 707 (2001) (biotechnology); Howard A. Shelanski, *Competition and Innovation in US Telecommunications*, 2000 **U Chi Legal F** 85 (telecommunications).

¹¹⁶ U.S. v. Alcoa, 148 F.2d 416 (2d Cir. 1945) (noting argument but not necessarily endorsing it).

¹¹⁷ 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 parties will be unable to agree on terms for 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.”); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 **TEX. L. REV.** 989, 1048-72 (1997) (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 (1994) [hereinafter Merges, *Intellectual Property*]; Merges & Nelson, *supra* note ___. It may also simply be hard to value a yet-to-be-made improvement. Frischmann, *supra* note ___, at [draft at 25, 37].

the improver is unable in turn to capture consumer surplus perfectly from its consumers.¹¹⁸

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 which is less than the aggregate social value across all markets, but greater than the private value users can capture. 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 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: “economic 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.”¹¹⁹ 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

¹¹⁸ 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.” Joseph Farrell & Carl Shapiro, *Intellectual Property, Competition, and Information Technology* [draft at 18] (working paper 2004). 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.

¹¹⁹ Frischmann, *supra* note __, at [draft at 8]; *id.* at [draft at 10] (making the same point on the demand side); W. Edward Steinmueller, *Technological Infrastructure in Information Technology*

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.¹²⁰ I’m not particularly concerned about such duplication, in part because a race tends to accelerate innovation, leading to social welfare benefits,¹²¹ in part because it leads to the development of alternative means of solving the same problem, a process which generates its own positive

Industries, in Technological Infrastructure, supra note __, at 117.

¹²⁰ 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 Richard Schmalensee and Robert D. Willig, eds, 1 **Handbook of Industrial Organization** 849 (North-Holland 1989) (discussing the costs of patent races); Mark F. Grady and Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 **Va L Rev** 305 (1992); Matthew Erramouspe, Comment, *Staking Patent Claims on the Human Blueprint: Rewards and Rent-Dissipating Races*, 43 **UCLA L Rev** 961 (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 (2000); Gideon Parchomovsky, *Publish or Perish*, 98 **Mich. L. Rev.** 926 (2000) (discussing strategic disclosure of information by participants in patent races). Indeed, Yoram Barzel analogizes patent races to the tragedy of the commons because they involve “overuse” of research. cite. 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.

¹²¹ 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. Rev.** 439 (2004). For a powerful critique of rent-dissipation theories in the copyright context, see Michael Abramowicz, *Copyright Redundancy* 10-18, working paper (2003), online at <http://www.gmu.edu/departments/law/faculty/papers/> (visited Sept 20, 2003).

externalities,¹²² 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,¹²³ a point which supports the one I make here. 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.¹²⁴ This rent-seeking is a cost

¹²² 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.”); 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.”); Matthew Conigliaro et al., *Foreseeability in Patent Law*, 16 **Berkeley Tech. L.J.** 1045, 1053 (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.”).

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 and Douglas A. Smith, *Patents, Prospects, and Economic Surplus*, 23 **JL & Econ** 197, 198 (1980).

¹²³ Duffy, *Marginal Cost*, *supra* note ___, at 53; Yoram Barzel, *Optimal Timing of Innovations*, 50 **Rev. Econ. & Stat.** 348 (1968).

¹²⁴ On the endemic rent-seeking in the copyright process, *see, e.g.*, Lemley,

of government-granted intellectual property rights. Indeed, economic theory suggests that private parties will spend up to the total value of the benefit seeking to capture it.¹²⁵

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,¹²⁶ 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.¹²⁷

Constitutionalization, supra note __; Litman, *Oregon, supra* note __; Litman, *Cornell, supra* note __. 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. For examples, see, e.g., 17 U.S.C. §§ 111, 114, 119, 512, 1201.

¹²⁵ See Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies and Theft*, 5 **Western 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.

¹²⁶ There are 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).

¹²⁷ Glynn Lunney is the first to make this point. See Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 **Vand. L. Rev.** 483 (1996).

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 economic justification for intellectual property simply does not map to the justification we offer for real property, because negative externalities dominate the analysis of real property and positive externalities dominate the analysis of intellectual property.

D. How Can We Strike the Right Balance?

While it is possible to dispute the magnitude of the costs discussed in the previous section, 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,¹²⁸ 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

¹²⁸ 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.

if one did not exist or that it be eliminated if it already did exist.¹²⁹ 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.¹³⁰ The 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

¹²⁹ Fritz Machlup, *An Economic Review of the Patent System* 80 (Study No. 15, Subcomm. on Patents, Trademarks, and Copyrights, Senate Judiciary Comm., 85th Cong., 2d Sess., Comm. Print 1958). See also **Areeda & Hovenkamp**, *supra* note ___, 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. Inst. & Theoretical Econ.** 142, 149 (2004) (“How much propertization is too much? That is an empirical question to which no one knows the answer.”).

¹³⁰ George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property: Comment on Cheung*, 8 **Res. L. & Econ.** 19, 21 (1986) (arguing that economic analysis of patents provides virtually no useful information). 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 H. Barton, *Reforming the Patent System*, 287 *Sci.* 1933 (2000); 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, Feb. 2000); Samuel Kortum & Josh Lerner, *Stronger Protection or Technological Revolution: What is Behind the Recent Surge in Patenting?*, 28 *RES. POL’Y* 1, 4 (1999); 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); 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, 102 (2001); Daniel K.N. Johnson & Vittorio Santaniello, *Biotechnology Inventions: What Can We Learn From Patents?*, in V. Santaniello et al. eds., **Agriculture and Intellectual Property Rights** 169 (2001); John R. Allison & Mark A. Lemley, *Who’s Patenting What? An Empirical Exploration of Patent Prosecution*, 53 *VAND. L. REV.* 2099 (2000); John R. Allison & Mark A. Lemley, *The Growing Complexity of the U.S. Patent System*, 82 *B.U. L. Rev.* 77 (2002); Mark A. Lemley, *An Empirical Study of the Twenty-Year Patent Term*, 22 *AIPLA Q.J.* 369 (1994); 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); Adam B. Jaffe & Manuel Trajtenberg, *International Knowledge Flows:*

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.¹³¹ They may also depend on the sort of information that is at issue.¹³² The problem is further complicated by the fact that we must take into account other means intellectual property owners have of enforcing rights, including contract and technological protection.¹³³ 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.¹³⁴ 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. He also quite rightly suggests that to the extent people are doing so, they should do so openly.¹³⁵ 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 something, one should own it.¹³⁶ 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

Evidence from Patent Citations, 8 *ECON. INNOV. & NEW TECH.* 105 (1999);

¹³¹ 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 (U. Chi. Press forthcoming 2005); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 **Va. L. Rev.** 1575 (2003).

¹³² See Frischmann, *supra* note __, at __.

¹³³ See Margaret Jane Radin, *Regime Change in Intellectual Property: Superseding the Law of the State With the “Law” of the Firm* [draft at 7] (working paper 2004).

¹³⁴ David McGowan, *Copyright Nonconsequentialism*, 69 **Mo. L. Rev.** 1 (2004).

¹³⁵ *Id.* at __.

¹³⁶ *Id.* at __.

domain background that must be justified.¹³⁷ Indeed, 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.¹³⁸

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.¹³⁹ 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 non-utilitarian 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 section 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

¹³⁷ On the public domain as a background norm, see, e.g., James Boyle, *Fencing Off Ideas: Enclosure & the Disappearance of the Public Domain*, *Daedalus*, Spring 2002, at 13, 16.

¹³⁸ **Benjamin Kaplan, An Unhurried View of Copyright 2** (1967).

¹³⁹ McGowan, *supra* note __, at __. This is a fair criticism. I think the solution is to improve the quality of utilitarian analysis and the transparency of argumentation, not to give up on utilitarianism altogether.

“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 monotonic. Because of the costs I identified in the previous section, 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 and inverted “U.”

At a bare minimum, increases in intellectual property protection that restrict more innovation than they encourage cannot be economically justified.¹⁴⁰ An obvious example is the retroactive extension of copyright term in the Sonny Bono Copyright Term Extension Act,¹⁴¹ which provided no new incentive to authors and complicated efforts to make use of a large number of existing works.¹⁴²

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 arises

¹⁴⁰ 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. 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 haven’t reached that point. I think there is substantial evidence to the contrary in copyright law.

¹⁴¹ 17 U.S.C. § 302.

¹⁴² For an economic critique of the Act, see *Eldred v. Ashcroft*, 537 U.S. 186, 242 (2003) (Breyer, J., dissenting).

from the real property cases in which our goal was to internalize negative externalities. It therefore 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.¹⁴³ 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.¹⁴⁴ Whether an accused infringer obtained a benefit without paying for it bears only indirectly on that question. “Free 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 the economic theory of real property and free riding, how then are we to think of them? What is the right analogy for

¹⁴³ 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.

¹⁴⁴ 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 **Tulane 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).

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 economic arguments against externalities and free riding.¹⁴⁵ As noted above, while most economic theory of property focuses on internalizing negative externalities, parts of property theory also deal with incentives to invest and positive externalities, and those latter parts seem more applicable to intellectual property. Nor is it necessarily the case that calling intellectual property “property” means that we will seek to fully internalize the social benefits of property. 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.¹⁴⁶ 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.¹⁴⁷ 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

¹⁴⁵ 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* [draft at 43] (working paper 2004).

¹⁴⁶ Carol M. Rose, *Canons of Property Talk, or Blackstone’s Anxiety*, 108 **Yale L.J.** 601, 631 (1998).

¹⁴⁷ See, e.g., **Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action** 23 (1990); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 **U. Chi. L. Rev.** 711, 769 (1986). Thomas 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).

right.¹⁴⁸ It is possible, 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.¹⁴⁹

Clearly these treatments are a step in the right direction. But these nuanced analyses of the variety of possible property rules are the exception, 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.¹⁵⁰ Even if intellectual property is reasonably treated as a

¹⁴⁸ **Landes & Posner**, *supra* note __, at __; Richard A. Epstein, *Steady the Course: Property Rights in Genetic Material*, in **Perspectives on Properties of the Human Genome Project** 153, 155 (F. Scott Kieff ed. 2003); Richard A. Epstein, *The Dubious Constitutionality of the Copyright Term Extension Act*, 36 **Loyola (L.A.) L. Rev.** 123, 126 (2002); Richard A. Epstein, *Addison C. Harris Lecture*, 76 **Ind. L.J.** 803 (2001); Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 **Duke L.J.** 1 (forthcoming 2004); Anupam Chander, *The New, New Property*, 81 **Tex. L. Rev.** 715, 778-79 (2003) (distinguishing between the property concept itself and the abuse of that concept in the Internet context); Jacqueline Lipton, *Information Property: Rights and Responsibilities*, 56 **Fla. L. Rev.** 136, 140 (2004). 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 or 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. Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emissions Trades and Ecosystems*, 83 **Minn. L. Rev.** 129, 154 (1998). Many have argued for the creation of public space online, often on a public trust model. See, e.g., Maureen Ryan, *Cyberspace as Public Space: A Public Trust Paradigm for Copyright in a Digital World*, 79 **Or. L. Rev.** 647 (2000); Molly S. van Houweling, *Cultivating Open Information Platforms: A Land Trust Model*, 1 **J. Telecomm. & High Tech. L.** 309 (2002); Jacqueline Lipton, *Mixed Metaphors in Cyberspace: Property in Information and Information Systems*, 35 **Loyola U. Chi. L. Rev.** 235, 239-40 (2003). See generally **Lawrence Lessig, The Future of Ideas: The Fate of the Commons in a Connected World** (2001) (articulating the metaphor of the Internet as an “information commons”).

¹⁴⁹ As Anupam Chander colorfully puts it, “if 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, *New Property*, *supra* note __, at 779-80.

¹⁵⁰ 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

species of property, for the reasons I have explained it is not “just like” real property. With that erroneous assumption has come 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,”¹⁵¹ and that fixed meaning will make all too tempting to fall into the trap of treating intellectual property just like “other” forms of property.¹⁵² Further, it is all too common to assume that because something is property, only private and not public rights are implicated.¹⁵³ Given the fundamental differences in the economics of real property and intellectual property, the use of the property label is simply too likely to mislead.

A second alternative is to treat intellectual property as a tort.¹⁵⁴ Unlike property systems,

Recording of Copyrighted Works: Hearings on H.R. 4783 Before the Subcommittee on Courts, Civil Liberties, and the Administration of Justice of the Committee on the Judiciary of the House of Representatives, 97th Cong., 2d Sess. 65 (1982).

¹⁵¹ Grey, *supra* note __, at 69.

¹⁵² 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 **Iss. Legal Scholarship** 1, 16-17 (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 __, at 79.

¹⁵³ Cf. Ghosh, *supra* note __, 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 the Chander-Sunder 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* (working paper 2004). The label “property” seems bound up in the public imagination with a conception of ownership that leaves little room for distributional concerns.

¹⁵⁴ This is relatively rare. Most 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, 108 (1998).

which focus their attention on legally enforceable rights to exclude, tort systems focus on compensating injured parties. In one sense, treating intellectual property as a form of tort law is consistent with the economic lessons of the previous sections. 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.¹⁵⁵ 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.¹⁵⁶ 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.¹⁵⁷ The point of intellectual property law is to depart from the norm of a competitive marketplace in order for the government to provide a

¹⁵⁵ **Restatement of Torts** §737 (1938); **Wigmore, Tort Law** ().

¹⁵⁶ *See generally* **Restatement (Third) of Restitution and Unjust Enrichment**.

¹⁵⁷ Tom Bell has proposed this analogy and evaluated the similarities and differences in great detail. Tom W. Bell, *Author's Welfare: Copyright as a Statutory Mechanism for Redistributing Rights*, 69 **Brooklyn L. Rev.** 229 (2003).

benefit to a private party.¹⁵⁸ This is also the point of the welfare system. The government is not doing so out of largess. 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. A similar argument can be made for welfare and other forms of government subsidy, for example for 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.¹⁵⁹ 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.¹⁶⁰

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. More importantly, 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.¹⁶¹ These efforts may be

¹⁵⁸ *Id.* at 273-74 (describing copyright as a “statutory entitlement” system).

¹⁵⁹ Indeed, Bell argues that “welfare policy reflects the aim of preventing negative externalities” – precisely what I have argued is the proper goal of intellectual property law. *Id.* at 264.

¹⁶⁰ 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).

¹⁶¹ A search for “welfare reform” in Westlaw’s TP-ALL database on May 17, 2004 yielded 4,319 results, and that’s just discussion of the subject among legal periodicals.

misguided, but even so welfare has a stigma.¹⁶² 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.

The same may be true of a related formulation, intellectual property as government regulation.¹⁶³ In a neutral sense intellectual property is obviously government regulation in the classic sense of that term – government intervention in the free market to alter the outcome it would otherwise produce because of a perceived market failure. 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.¹⁶⁴ But regulation is out of vogue, and those who talk about intellectual property as regulation usually do so in order to denigrate it.¹⁶⁵

Nonetheless, 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. 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

¹⁶² 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).

¹⁶³ John Duffy has noted the parallels between the economic theory of public utility regulation and intellectual property law. See Duffy, *Marginal Cost*, *supra* note __, at 39-41. See also **Lessig, Free Culture**, *supra* note __, at 194; Shubha Ghosh, *Rethinking the Patent Bargain Metaphor: Market Integrity, Science Policy and the Assurance Game* (working paper 2004) (suggesting a regulatory view of patent law).

¹⁶⁴ See Joseph P. Liu, *Regulatory Copyright* (working paper 2003).

¹⁶⁵ 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.”).

literature.¹⁶⁶ 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.¹⁶⁷

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 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.

In the final analysis, I don’t know that we need an analogy at all.¹⁶⁸ We have a well-

¹⁶⁶ See, e.g., John F. Duffy, *The Marginal Cost Controversy in Intellectual Property*, 71 **U. Chi. L. Rev.** 37 (2004); Michael Abramowicz, *Perfecting Patent Prizes*, 56 **Vand. L. Rev.** 115 (2003); Steven Shavell & Tanguy van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 **J. L. & Econ.** 525 (2001); Michael Kremer, *Patent Buyouts: A Mechanism for Encouraging Innovation*, 113 **Q. J. Econ.** 1137 (1998). For an earlier discussion, see Brian Wright, *The Economics of Invention Incentives: Patents, Prizes and Contracts*, 73 **Am. Econ. Rev.** 691 (1983).

¹⁶⁷ That fact may introduce other distortions, however. See **James Boyle, Shamans, Software and Spleens** 35-42 (1996) (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).

¹⁶⁸ 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 __; Lemley, *Place*, *supra* note __. I don’t intend to revisit that debate here.

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.¹⁶⁹

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.

¹⁶⁹ *Compo Co. Ltd. v. Blue Crest Music Inc.*, 45 C.P.R. (2d) 1, 13 (Sup. Ct. Canada 1979).