

THE UPSIDE OF INTELLECTUAL PROPERTY'S DOWNSIDE

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Intellectual property law exists because exclusive private rights provide an incentive to innovate. This is the traditional upside of intellectual property: the production of valuable information goods that society would otherwise never see. In turn, too much intellectual property protection is typically viewed as counterproductive, as too much control in the hands of private rightsholders creates more artificial scarcity and imposes more costs on future innovators than the incentive effect warrants. This is the traditional downside of intellectual property: reduced production and impeded innovation.

This Article turns the traditional discussion on its head and shows that intellectual property's putative costs can actually be benefits. It does so by recognizing that not all innovation is good—that there are certain industries that society may prefer to suppress. If intellectual property reduces production and impedes innovation in those industries, then its protection would be a net gain for society. We examine a handful of such industries (tax planning, biotechnology, fashion, and pornography) and demonstrate that keeping (or bringing) them under the intellectual property umbrella may be the best way to stifle them. In short, we describe the circumstances under which intellectual property's downside is society's upside.

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INTRODUCTION

Intellectual property’s usual story is one of promoting progress: Exclusive rights create an incentive for the production of information goods. There are other stories,¹ of course, but modern scholarship and policymaking largely embrace the idea that society as a whole benefits when innovators can control the unauthorized copying of their innovations and thereby gain the incentive to innovate in the first place.² This is the upside of intellectual property: the production of valuable goods that we would otherwise never see.

1. E.g., Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533 (1993) (Lockean approach); Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History, 1550–1800*, 52 HASTINGS L.J. 1255 (2001) (natural rights perspective); Neil Netanel, *Copyright Alienability Restrictions and the Enhancement of Author Autonomy: A Normative Evaluation*, 24 RUTGERS L.J. 347 (1993) (personhood theory).

2. See, e.g., U.S. CONST. art. I, § 8 (giving the United States Congress the power to grant patents and copyrights in order to “promote the Progress of Science and useful Arts”); *Mazer v. Stein*, 347 U.S. 201, 219 (1954) (“The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare . . .”); WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 4–5 (2003) (reviewing rationales for intellectual property and finding the economic rationale most compelling). We focus here on intellectual property’s “big two,” patent and copyright, because the other fields of intellectual property (trademark, trade secret, publicity rights, etc.) are not as single-minded in their devotion to the incentive model. We do, however, briefly discuss the implications of our theory for trademark law in Part II.C *infra*.

Intellectual property protection also comes with some well-known costs. Too much control in the hands of private rightsholders can create more artificial scarcity than the incentive effect warrants. Such overprotection not only denies the public access to innovation without a corresponding gain in incentive to innovate, but also retards future innovation by making it more difficult for downstream innovators to make use of and improve existing innovations.³ In short, too much intellectual property protection can actually limit access to information goods and slow down, rather than speed up, the pace of innovation. This is the downside of intellectual property.

In the usual story, then, policymakers call on intellectual property law when its upside is greater than its downside—that is, when the benefits of improved incentives outweigh the costs of reduced production and impeded innovation. And when the reverse is true (when the downside is greater than the upside), policymakers eschew intellectual property protection. However the calculation turns out, the unspoken assumption is that innovation is good. If an entitlement would promote innovation, it should be granted, and if it would not, it should not.

In this Article, we turn the usual story on its head. Contrary to the conventional wisdom, society should sometimes grant intellectual property rights to an industry even when doing so would suppress innovation. Our rationale is that not all innovation is created equal; innovation in some industries, such as cloning or pornography, might be a loss for society. If so, then the usual story gets reversed: We should grant protection when—indeed, *because*—its net effect is to discourage innovation in a disfavored industry. Intellectual property's downside becomes society's upside.

This unorthodox use of intellectual property law is useful in and of itself, as it shows that exclusive rights over information goods can play a valuable and previously unacknowledged role in innovation regulation and industrial policy. It also contributes to a series of broader debates. First, a number of scholars have begun to argue for the resurrection of intellectual property law's long-dormant role as a moral regulator, but they tend to assume that morally questionable industries should be denied protection.⁴ Our analysis, however, suggests that they should take the exact opposite approach to reach their policy goals. Second, we add a dimension to a recent strand of scholarship that celebrates “low-IP” industries—areas where innovation thrives without

3. See *infra* Part I.

4. See, e.g., Margo A. Bagley, *Patent First, Ask Questions Later: Morality and Biotechnology in Patent Law*, 45 WM. & MARY L. REV. 469 (2003); Ann Bartow, *Pornography, Coercion, and Copyright Law 2.0*, 10 VAND. J. ENT. & TECH. L. 799 (2008); Brant J. Hellwig, *Questioning the Wisdom of Patent Protection for Tax Planning*, 26 VA. TAX REV. 1005, 1008 (2007).

intellectual property protection, such as fashion.⁵ We call into question whether all low-IP innovations should be celebrated (and offer up an attractive regulatory tool when the answer is no). Finally, we show that intellectual property's much-criticized uniformity costs⁶ can become uniformity benefits. In other words, intellectual property law is not good at excluding particular subject matters from its scope, but this ostensible failing can actually make it a particularly nimble policy lever.⁷

This Article proceeds as follows. In Part I, we set the stage by exploring in detail the two costs of intellectual property protection most central to the formulation of innovation policy: the static cost of constricted production and the dynamic cost of constricted innovation. Only after one appreciates how these costs arise can one consider how they might be turned around, converted into benefits, and used as regulatory instruments for disfavored industries.

In Part II, we examine how these costs play out in four unrelated industries: tax planning, biotechnology, fashion, and pornography. For each of these industries, there is good reason to believe that intellectual property rights would retard, rather than promote, production and innovation. And because each industry is also arguably morally suspect, such an outcome may well enhance society's overall welfare even as it diminishes the industry's. (We take no position on whether these industries are in fact bad for society; rather, we simply note that each has come under fire for having socially undesirable effects and is therefore a candidate for our brand of counterintuitive policymaking.)

Finally, Part III addresses the effectiveness and practicality of this use of intellectual property. We discuss why direct regulation of an industry might not work as well as the kind of indirect regulation that we envision, and we show that the political economy of an industry might make our regulatory approach not only politically possible, but also more politically feasible than the

5. See, e.g., Christopher J. Buccafusco, *On the Legal Consequences of Sauces: Should Thomas Keller's Recipes Be Per Se Copyrightable?*, 24 *CARDOZO ARTS & ENT. L.J.* 1121 (2007); Emmanuelle Fauchart & Eric von Hippel, *Norms-Based Intellectual Property Systems: The Case of French Chefs*, 19 *ORG. SCI.* 187 (2008); Jacob Loshin, *Secrets Revealed: How Magicians Protect Intellectual Property Without Law*, in *LAW AND MAGIC: A COLLECTION OF ESSAYS* (Christine A. Corcos ed., 2009); Dotan Oliar & Christopher Sprigman, *There's No Free Laugh (Anymore): The Emergence of Intellectual Property Norms and the Transformation of Stand-Up Comedy*, 94 *VA. L. REV.* 1787 (2008); Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 *VA. L. REV.* 1687, 1699 (2006).

6. See, e.g., John R. Allison & Starling D. Hunter, *On the Feasibility of Improving Patent Quality One Technology at a Time: The Case of Business Methods*, 21 *BERKELEY TECH. L.J.* 729, 736 (2006) (arguing that a subject matter restriction in patent law would be futile at best and counterproductive at worst); Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 *AM. U. L. REV.* 845 (2006) (detailing the costs of a one-size-fits-all approach to protected subject matter).

7. See *infra* notes 264–272 and accompanying text.

alternatives. In the end, intellectual property entitlements are more versatile and more robust than existing accounts would have us believe. Turning their downsides into upsides not only holds theoretical promise, but also comports with the practical realities of the economic and political spheres.

I. INTELLECTUAL PROPERTY'S DOWNSIDE

The traditional view of intellectual property justifies its exclusive rights as necessary to incentivize production of information goods. But no one claims that this incentive comes without costs. The costs can take several forms, such as the creation of opportunities for wasteful rent seeking, the expense of administering the legal entitlements, and the diversion of investment from other welfare-enhancing enterprises.⁸

In the following discussion, however, we focus on the costs most central to discussions of intellectual property law's rationale: the static cost of constricted production and the dynamic cost of constricted innovation. Once the nature of these costs is clear, we can explore how they might be converted into benefits and used to regulate disfavored industries.

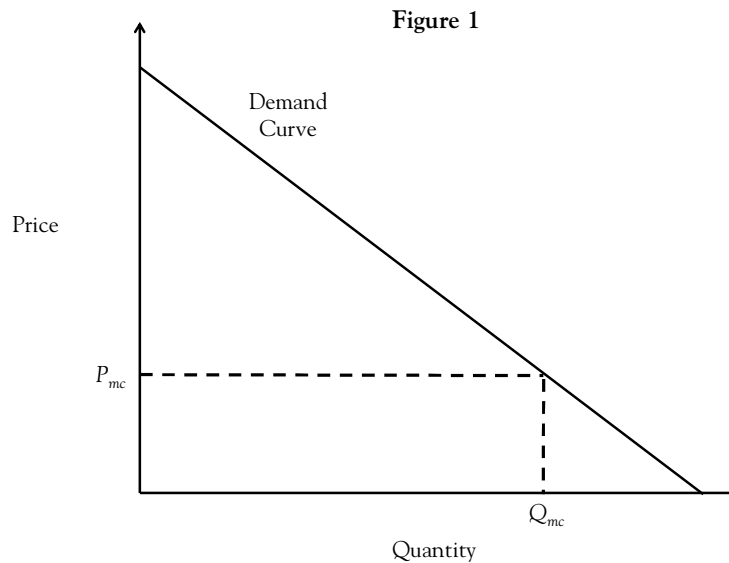
A. Production Reduction

To understand how intellectual property rights constrict production of information goods, first consider how production might proceed in the absence of such rights. Once an information good—say, a new drug or a book—is introduced into the marketplace, it becomes subject to widespread competition because the innovation is a “public good” that can be easily copied and distributed without depleting its supply or depriving others of its use. The price of the information good therefore drops to the marginal cost of production.⁹ This perfectly competitive market is depicted in Figure 1 below, in which the

8. See LANDES & POSNER, *supra* note 2, at 16–21; Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1058–59 (2005).

9. ROY J. RUFFIN & PAUL R. GREGORY, *PRINCIPLES OF MICROECONOMICS* 191–92, 201–04 (5th ed. 1993) (defining perfect competition and explaining the resulting price of marginal cost). Of course, the marginal cost of copying varies depending on what is being copied. Information goods in digital media are copied at essentially no cost. See Niva Elkin-Koren & Eli Salzberger, *Law and Economics in Cyberspace*, 19 INT'L REV. L. & ECON. 553, 560 (1999). In contrast, copying other information goods, such as a detailed nuclear refining process, would be incredibly costly. Regardless of the cost of copying, however, the copier does not have to engage in the same research and development as the initial innovator. This ability to avoid research and development gives the copier a cost advantage in most cases.

price equals marginal cost (identified as P_{mc}), resulting in a given quantity of information goods produced (identified as Q_{mc}) for a given demand curve.¹⁰



In most circumstances, a market that drives price down to marginal cost is a good thing. Under the traditional view of intellectual property law, however, this is not the case, because of the incentive problem: If innovators can only recover their marginal cost of production, they will lack the incentive to create the information good in the first place. This is because every innovation requires upfront expenditures to cover the time and effort (not to mention the risk) that go into its creation.¹¹ For example, a studio will not embark on a major

10. See RUFFIN & GREGORY, *supra* note 9, at 203–04.

11. See, e.g., MERLE CRAWFORD & ANTHONY DI BENEDETTO, *NEW PRODUCT MANAGEMENT* 26–33 (8th ed. 2006) (describing the “phases” of new product development); Gideon Parchomovsky & Peter Siegelman, *Towards an Integrated Theory of Intellectual Property*, 88 VA. L. REV. 1455, 1466–67 (2002) (stating that “absent legal protection, competitors would copy [information goods] without incurring the initial costs of producing them” and that “[u]nauthorized reproduction would drive down the market price to the cost of copying, original authors and inventors would not be able to recover their expenditures on authorship and R&D, and, as a result, too few inventions and expressive works would be created”); Kevin Zhu, *Internet-Based Distribution of Digital Videos: The Economic Impacts of Digitization on the Motion Picture Industry*, 11 ELECTRONIC MARKETS 273, 277 (2001) (noting that the “high costs” of producing motion pictures “create barriers for new movie producers to enter the industry”).

motion picture project if it knows that it will eventually have to price its movie to compete with copyists who did not have to expend the initial resources to shoot and edit the film.

Therefore, potential innovators need a mechanism by which they can charge more than marginal cost in order to recoup their investment expenditures. Intellectual property's exclusive rights provide this mechanism by giving innovators the power to exclude potential competitors from selling similar information goods.¹² This control allows rightsholders to be price searchers, as opposed to price takers who must settle for a price equivalent to marginal cost.¹³ The law thus allows rightsholders to engage in monopolistic pricing—or at least pricing that would not be possible without the market power that intellectual property confers.¹⁴

Figure 2 shows the difference that these exclusive rights make.¹⁵ The rightsholders' market power allows them to charge a price higher than marginal cost (P_p). This increased price in turn allows rightsholders to capture the monopoly profit indicated in Figure 2.¹⁶ This ability to generate revenue in excess of marginal cost gives innovators some assurance that they can recover their initial development investment and thus encourages the creation of the information good in the first place. In our previous example, the studio could

12. The intellectual property right does not automatically give the rightsholder market power over price. See *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 178 (1965) (noting that “[t]here may be effective substitutes for the [patented] device which do not infringe the patent”); William A. Drennan, *Changing Invention Economics by Encouraging Corporate Inventors to Sell Patents*, 58 U. MIAMI L. REV. 1045, 1158 (2004). However, the right gives the holder the power to exclude others from selling products falling within its scope. Thus, necessarily, there will be at least some “substitute” products that the rightsholder can exclude. See SUZANNE SCOTCHMER, *INNOVATION AND INCENTIVES* 36 (2004) (“Intellectual property rights make the proprietor a monopolist.”).

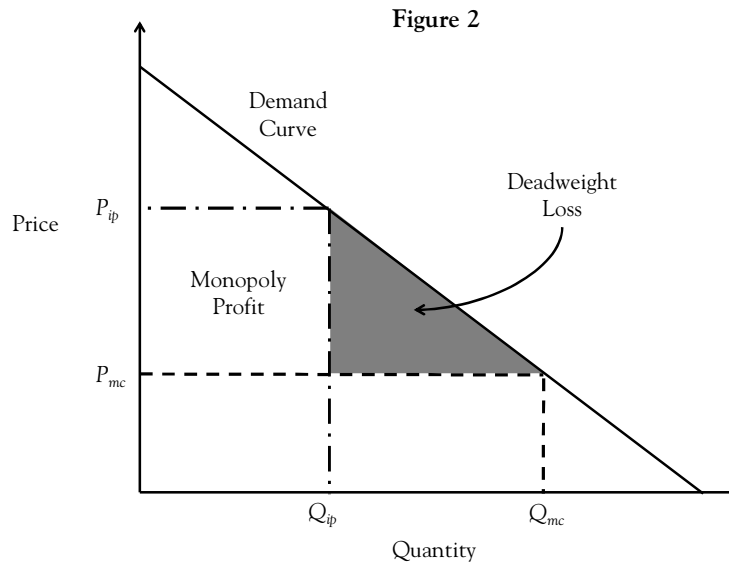
13. See RUFFIN & GREGORY, *supra* note 9, at 216–23 (explaining how a monopolist can behave as a price searcher).

14. See F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 450–51 (3d ed. 1990) (noting that patentees price in excess of cost); Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 296 (2003) (“[F]rom an ex post perspective, excluding rivals from any property rights valuable and unique enough to enjoy monopoly power will generally constrain consumer choice, lower output, and raise prices, thus producing allocative inefficiency.”).

15. This graphical representation of the impact of intellectual property rights has appeared in numerous articles before. See, e.g., Ian Ayres & Paul Klemperer, *Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies*, 97 MICH. L. REV. 985, 989–90 (1999); James Gibson, *Re-Reifying Data*, 80 NOTRE DAME L. REV. 163, 207 (2004); Michael J. Meurer, *Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works*, 45 BUFF. L. REV. 845, 878 (1997). We omit from Figure 2 the mechanism by which the higher price is actually determined—the intersection of the marginal revenue curve and the marginal cost curve. See RUFFIN & GREGORY, *supra* note 9, at 221–23.

16. See RUFFIN & GREGORY, *supra* note 9, at 221–23.

set the ticket price for the film higher than the cost of merely making an additional copy, and the increase in price would provide revenue to defray the film's initial development costs.



This incentive, however, has its own price: the deadweight loss typically associated with monopolies.¹⁷ The deadweight loss in this case, represented by the shaded triangle in Figure 2, comprises consumers whose valuation of the information good is higher than the marginal cost of production (P_{mc}) but lower than the monopoly price (P_{ip}). Monopolistic pricing prevents these consumers from obtaining the good, and the failure of this transaction hurts both the rightsholder and the consumer.¹⁸ For example, a common critique of pharmaceutical patents is that because they facilitate higher pricing for patented

17. See SCOTCHMER, *supra* note 12, at 37 (“Deadweight loss is the main defect of intellectual property as an incentive mechanism.”).

18. Like any monopolist, the intellectual property owner can attempt to price discriminate to avoid the deadweight loss. See Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293 (1970). But effective price discrimination is very difficult, if not impossible, to implement. See SCOTCHMER, *supra* note 12, at 37; 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).

drugs, they deny those with lower incomes access to beneficial medicine.¹⁹ Reducing the number of consumers who can afford the good also means that fewer units of the information good are produced; the higher price reduces production from Q_{mc} to Q_p in Figure 2.²⁰

Of course, the traditional approach to intellectual property recognizes this downside. The usual rebuttal is that the benefits of the incentive to create outweigh the loss in production.²¹ In other words, the comparison between Figure 1 (a perfectly competitive market) and Figure 2 (a monopolized market) is inapt because without the incentive that exclusive rights provide, the good would not be created. This means that the proper comparison is not between constrained production at a monopoly price (Q_p) and higher production at marginal cost (Q_{mc}), but between constrained production and no production at all.²²

Whether this traditional explanation is correct depends on how badly innovators need the incentives created by intellectual property. For any given industry there may be other factors that prompt the production of information goods.²³ Sometimes competition is enough to spur innovation by forcing the development of new information goods in order to avoid being pushed out of the market altogether.²⁴ Sometimes those who introduce an information good enjoy a first-mover advantage significant enough to provide the needed

19. See, e.g., James Thuo Gathii, *Rights, Patents, Markets and the Global AIDS Pandemic*, 14 FLA. J. INT'L L. 261, 263–64 (2002) (discussing patent's role in denying "low-end consumers" access to AIDS medications). The monopolistic pricing also denies the patentee the ability to profit from those lower-income consumers (a fact that generates equal welfare loss, if not equal sympathy).

20. See RUFFIN & GREGORY, *supra* note 9, at 240–44 (noting that deadweight loss includes contrived scarcity on the part of the monopolist).

21. See, e.g., LANDES & POSNER, *supra* note 2, at 20–21. There are other responses as well. The first we have already addressed—the rightsholder can avoid the deadweight loss through price discrimination. See *supra* note 18. Another response is that "if the patented invention lowers costs sufficiently, then output will expand beyond the preinvention level, thereby rendering the conclusion that patents restrict production at odds with observed fact." Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 251 (1994). This second response assumes a very narrow form of intellectual property rights—one that protects the process for making an information good, not the information good itself. The argument also assumes the inventiveness of the process reduces production costs.

22. Note also that as long as the intellectual property entitlement has a limited duration, its price will eventually descend to marginal cost, and the entire population of consumers can have access to it. See, e.g., John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439 (2004).

23. SCHERER & ROSS, *supra* note 14.

24. See Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1604–05 (2003). For example, there is empirical evidence that it is competition, not intellectual property protection, that leads to innovation in the telecommunications field. See Howard A. Shelanski, *Competition and Deployment of New Technology in U.S. Telecommunications*, 2000 U. CHI. LEGAL F. 85, 85.

incentive—a head start in building production and distribution facilities,²⁵ an unchallenged opportunity to generate loyalty among consumers,²⁶ and so forth.²⁷ Sometimes self-help mechanisms like digital rights management or mass-market contracting can inhibit the copying of the information good long enough for the innovator to recover development costs.²⁸ Finally, sometimes innovation is directly subsidized, either by the government (for example, the National Science Foundation or the National Endowment for the Arts) or by private organizations (for example, the Carnegie Institution for Science or the Rockefeller Foundation), so that the innovator recovers his or her costs at the front end and thus does not have to worry about unregulated copying at the back end.²⁹

These alternative sources of incentive may generate a deadweight loss of their own, insofar as they bestow market power on the innovator. Even so, they demonstrate that intellectual property's deadweight loss can be needlessly additive or duplicative. In other words, when a sufficient incentive would exist without intellectual property protection, a comparison between Figure 1 and Figure 2 is appropriate after all. The information good would be introduced even without intellectual property law, and the costs of protection accordingly loom larger than the benefits. In the end, then, intellectual property rights can sometimes increase production of information goods, but in other circumstances, intellectual property protection raises prices and constrains production for no good reason.

B. The Innovation Curve

We have now seen the first of our two costs of intellectual property: the constricted production that results from the monopolistic pricing made possible

25. See Rajshree Agarwal & Michael Gort, *First-Mover Advantage and the Speed of Competitive Entry, 1887–1986*, 44 J.L. & ECON. 161, 173 (2001) (noting that a first mover enjoys an effective monopoly that declines over time); Robert P. Merges & Richard R. Nelson, *Market Structure and Technical Advance: The Role of Patent Scope Decisions*, in ANTITRUST, INNOVATION, AND COMPETITIVENESS 185, 217 (Thomas M. Jorde & David J. Teece eds., 1992) (describing one of the advantages of a head start as the early “establishment of production and distribution facilities”).

26. Roger A. Kerin et al., *First-Mover Advantage: A Synthesis, Conceptual Framework, and Research Propositions*, 56 J. MARKETING 33, 34–39 (1992); Marvin B. Lieberman & David B. Montgomery, *First-Mover Advantages*, 9 STRATEGIC MGMT. J. 41, 46 (1988) (citing consumer loyalty to brand as part of the first mover's advantage).

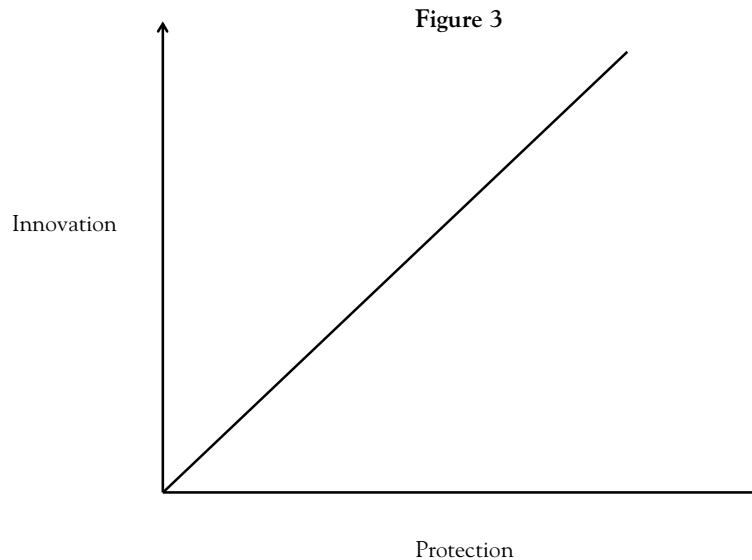
27. See generally Richard C. Levin et al., *Appropriating the Returns from Industrial Research and Development*, 3 BROOKINGS PAPERS ON ECON. ACTIVITY 783 (1987).

28. See Gibson, *supra* note 15, at 207.

29. See generally 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).

by a rightsholder's exclusivity. That cost is static, in the sense that it arises in the context of a single information good over which exclusive rights are exercised. We now turn to our second cost of intellectual property protection: constricted innovation. This cost is dynamic, in that it has to do with the effect that exclusive control of one information good has on the production of subsequent information goods.

To understand this dynamic cost, let us return to the basic economic incentive theory. Without intellectual property's exclusive rights (the argument goes), we would see less overall innovation, and society would be worse off. Figure 3 illustrates this basic notion. As we move from no intellectual property protection to some intellectual property protection (traveling to the right on the *X* axis), we also move from no innovation to some innovation (traveling upward on the *Y* axis).



Yet Figure 3 only tells part of the story. Even the most stalwart defender of intellectual property entitlements will admit that, at some point, further protection generates *less* overall innovation in the industry, not more.³⁰ Because

30. This downside to intellectual property protection is different from the deadweight loss discussed above. Deadweight loss represents a reduction in the total units made available to a public willing

innovation is often cumulative, binding up old innovation in legal entitlements tends to increase development costs for follow-on innovators, who need to use the old innovation as the basis for creating new information goods. Eventually these costs begin to outweigh the offsetting incentive benefits for the original innovator.³¹ Consider Hollywood: If the copyrights in the *Flash Gordon* films of the 1930s gave their owners exclusive control not just over their own expression but also over any subsequent space opera, the public might never have gotten *Star Wars*—or would have had to wait longer or pay more for it.

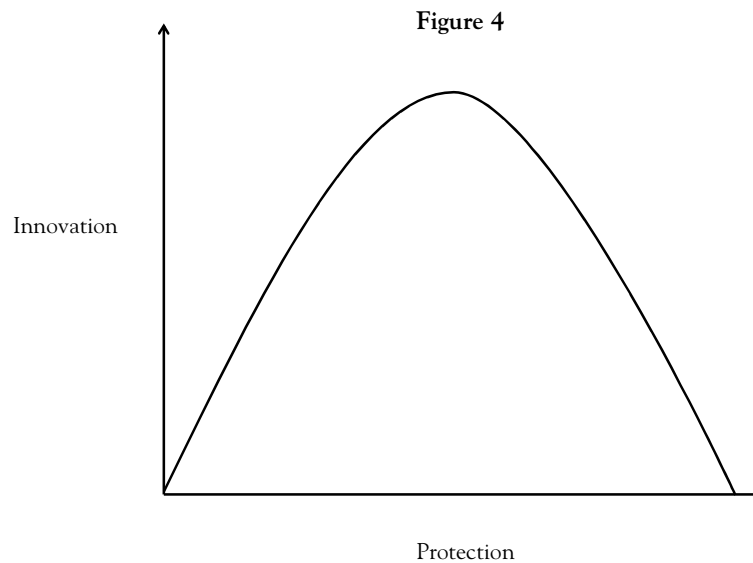
Therefore, if intellectual property law is to maximize overall innovation, it must strike a balance between too much protection and too little. A certain amount of protection generates benefits in the form of increased incentive to innovate, and those benefits outweigh the costs imposed on follow-on innovators. But the cost-benefit calculus eventually shifts, and further protection becomes counterproductive.

We express this idea in Figure 4. An increase in protection for intellectual property (traveling to the right on the X axis) causes an increase in total innovation (traveling up the Y axis), and the curve ascends—but only to a point. After that point, further protection begins to generate less innovation. Follow-on innovation becomes more costly than the incentive effects warrant, and the curve descends.

Figure 4 tells a more complete story than Figure 3, but it too leaves some chapters out. For example, the X axis represents a combination of the many ways in which intellectual property protection can be increased: the duration of the entitlement, its breadth, the ease of acquisition, and so forth. Such forms of protection do not necessarily have any relation to one another, which means that the innovation curve will be the sum of a number of individual curves and might accordingly have multiple hills and valleys (or at least not ascend and descend as smoothly as Figure 4 suggests).

to pay more than marginal cost for the specific innovation. In contrast, the loss in follow-on innovation manifests in decreased production in the industry as a whole.

31. See, e.g., William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 332–33 (1989); Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 916 (1990). This is not to say that there is unanimity regarding how much is too much when it comes to defining entitlements and what form these protections should take. In fact, disagreement on these matters is the source of almost all intellectual property scholarship. But almost everyone would admit that there comes a point at which further protection does more harm to downstream innovators than its benefits warrant.

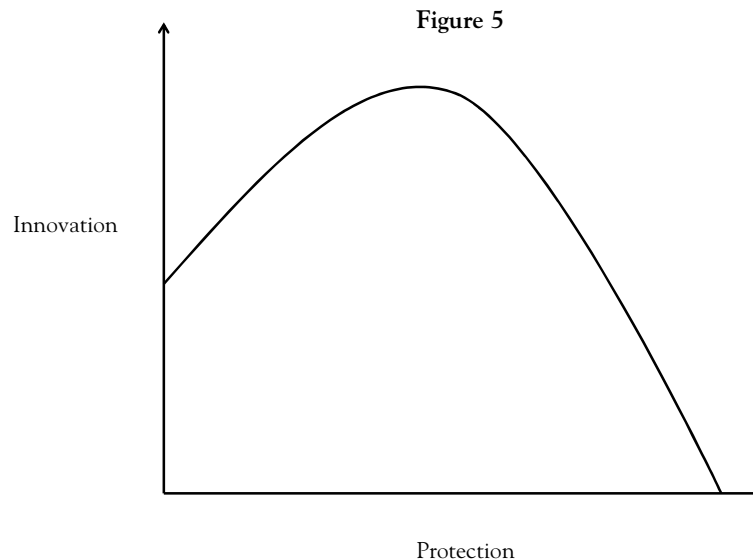


For present purposes, however, we set aside such concerns, for they do not invalidate our foundational premise that *somewhere* the curve peaks, and the goal of scholars and policymakers alike is assumed to be the calibration of intellectual property entitlements in order to reach that peak—the sweet spot of optimal protection.³² We will instead focus on making the innovation curve more sophisticated in two other ways, both more pertinent to our thesis: At what level of innovation does the curve begin, and how soon does it peak?

First, the curve's beginning. Figures 3 and 4 assume that no intellectual property protection ($X = 0$) means no innovation ($Y = 0$). This assumption is demonstrably wrong. As discussed above, most industries—in fact, probably all industries—would see some positive level of innovation even if intellectual property law did not exist in any form. This is because innovators never rely exclusively on exclusive rights for their incentive; instead, they typically find reward in the advantages conferred by lead time, knowledge gains, reputational benefits, marketing efforts, and technological and contractual measures

32. We reiterate that the innovation curve (as we use it) is a purely conceptual device. We do not claim that the curve for any particular form of innovation ascends or descends steeply, shallowly, or anywhere in between; we claim only that the curve peaks at some point.

that can help the innovator maintain control of the innovation.³³ Copyright law may give us more movies, music, and literature than we would otherwise have, and patent law may do the same for inventions, but the absence of those legal regimes would not mean zero innovation. These other sources of incentive therefore supplement intellectual property protection.³⁴ This means that a more realistic innovation curve would not start at zero innovation, but would begin with a value of $Y > 0$, as we show in Figure 5.³⁵



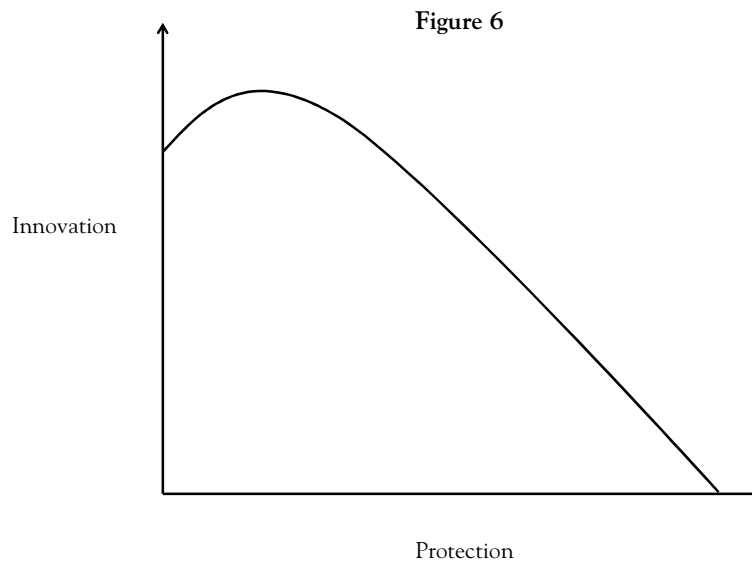
Second, the curve's peak. So far we have been using the innovation curve to describe the effect of intellectual property protection on innovation in general. But we might also use it to describe the effect of protection on particular industries. For example, because the curve in Figure 5 peaks a good distance to the right on the X axis, it can be seen as representing types of innovation that thrive under a legal regime of extensive intellectual property protection—a

33. See *supra* notes 24–29 and accompanying text.

34. Note that the arrival of intellectual property rights may mean the departure of some of these alternative sources of incentive through such mechanisms as preemption of contracts, loss of trade secrecy when an innovation is patented, and so forth.

35. One might question the far end of the innovation curve as well: Even an infinite amount of intellectual property protection might not stamp out all production of innovation goods. So after peaking, the curve might descend towards—but never touch—the X axis.

“high-IP” system.³⁶ Think pharmaceuticals or feature films. In contrast, other industries do well with very little intellectual property protection. Recent years have seen much commentary on such “low-IP” industries, from fashion design³⁷ and the culinary arts³⁸ to stand-up comedy³⁹ and magic tricks.⁴⁰ All manage to survive—even thrive—despite being left relatively unprotected by intellectual property law. If we were to draw an innovation curve for such low-IP industries, then, it would presumably start higher on the Y axis and peak at a comparatively low X value, as seen in Figure 6.



Given these differences among industries, one might expect intellectual property law to be fairly industry-specific, granting extensive protection to those industries that need it and withholding it from those that do not. For example, both patent and copyright are comparatively high-IP regimes that confer strong and long-lasting entitlements on their beneficiaries. One would accordingly

36. The terms high-IP and low-IP originated with Kal Raustiala and Chris Sprigman. See, e.g., Raustiala & Sprigman, *supra* note 5, at 1718.

37. See *id.*

38. See Buccafusco, *supra* note 5; Fauchart & von Hippel, *supra* note 5.

39. See Oliar & Sprigman, *supra* note 5.

40. See Loshin, *supra* note 5.

hope that industries falling within patent and copyright would have innovation curves like that in Figure 5—in other words, that extensive protection would not overvalue the incentive to initial innovators at the expense of follow-on innovators.

Yet each of these “big two” regimes covers a variety of information goods. Copyright encompasses sculpture, dance, software, architecture, music, literature, film, and more.⁴¹ Patents can be obtained for everything from traffic signs to transgenic mice.⁴² Some of the covered industries, such as pharmaceuticals or feature films, probably do need the high-IP entitlements that intellectual property law provides. But for others, such as software (an industry that happens to fall within both regimes), the issue is murkier; considerable evidence suggests that programmers would program even without the strong protection that patent and copyright provide.⁴³

In other words, patent and copyright assume a high-IP curve like that in Figure 5, but certain industries within the two regimes may in fact operate under a low-IP curve like that in Figure 6. If so, there will be a disparity between the law’s innovation curve and the actual innovation curve of the industry in question.⁴⁴

Figure 7 illustrates this point. Under the one-size-fits-all approach of patent and copyright, the default level of protection is set at X_p for all industries. For high-IP industries, this level of protection is optimal; it generates maximum overall innovation (Y_p). For low-IP regimes that fall within reach of patent or copyright, however, this level of protection is excessive. In fact, as Figure 7 shows, a protection level of X_p would generate innovation of Y_s for such industries. This is less innovation than would have occurred without any protection at all. This point plays a key role in Part II, so it bears repeating: Because strong intellectual property entitlements take us so far to the right on the X axis, low-IP industries covered by those rights might actually see less overall innovation

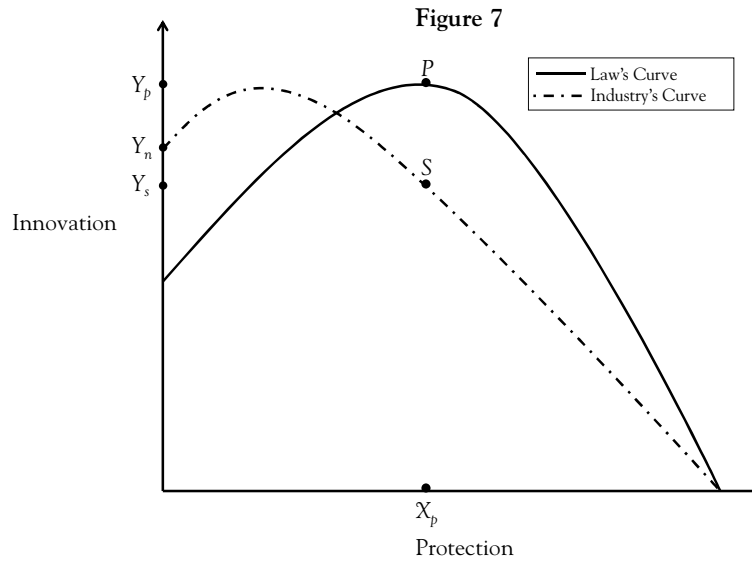
41. 17 U.S.C. § 102(a) (2006).

42. *E.g.*, *Traffix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23 (2001) (traffic sign); U.S. Patent No. 4,736,866, claim 12 (filed June 22, 1984) (transgenic mice).

43. See Yochai Benkler, *Coase’s Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002) (showing that “commons-based peer-production” generates software without the need for intellectual property incentive).

44. This is not to say that there are no industry-specific doctrines within the broader regimes of patent and copyright; there are. See, *e.g.*, James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882, 936 (2007) (“[T]he history of American copyright is essentially an evolution from a broad, industry-neutral property right to a set of detailed, industry-specific regulations.”). Nevertheless, they operate within default regimes whose uniformity imposes costs on the disparate industries they cover. See Carroll, *supra* note 6.

than they would under a no-IP regime ($Y_n > Y_s$), as the added costs of follow-on innovation outweigh any marginal gain in initial incentive.⁴⁵



In sum, for those industries that find sufficient incentive to innovate without much help from intellectual property law, strong exclusive rights can impose costs greater than the countervailing benefit in incentive. The costs come in at least two forms. First, there is the static cost of constrained production: Fewer overall units of a given information good are produced with intellectual property protection than without. Second, there is the dynamic cost of constrained innovation: Less total innovation occurs with protection than would occur without, as downstream innovators are unduly hampered by preexisting entitlements.

Analytically, these two downsides are related. One can view the dynamic cost as a natural consequence of the static cost, in that the deadweight loss includes consumers who would have used the protected good as the basis for

45. Organizations like Creative Commons, which engage in private collective efforts to reduce the level of protection, are essentially trying to move the X axis value leftward toward what they view as a more optimal point—i.e., from the suboptimal peak of the law's curve to the presumably optimal peak of the industry's curve. It is probably no coincidence that such collective efforts got their start in the software industry where strong protection may stifle innovation. See Benkler, *supra* note 43.

further innovation but who cannot afford the monopoly price. And one can view the static cost as a factor that contributes to the innovation curve's inevitable downside.

For our purposes, however, it is useful to view them separately, because we now turn to an examination of how four low-IP industries fare (or would fare) under high-IP regimes. In doing so, we see that sometimes it is the static costs that predominate, while other times it is the dynamic costs—and these different costs inform the utility of intellectual property as a regulatory instrument. But regardless of which cost predominates, in all four cases the costs of intellectual property can be turned around and used to promote a policy that is the exact opposite of intellectual property's usual goal. The downsides become upsides.

II. DOWNSIDES AS UPSIDES: FOUR CASE STUDIES

Not all innovation is created equal. A growing body of scholarship has challenged intellectual property law to expand its focus beyond the advancement of engineering and the arts and instead consider social welfare on a broader scale. Should copyright protection for pornographic works depend on the fair treatment of the performers?⁴⁶ Should patent rights extend to human cloning?⁴⁷ In other words, these scholars are asking a threshold question that intellectual property law has long ignored: Do we want to promote production and innovation at all in these industries? If not, the argument goes, then intellectual property rights should be withheld or at least be made more difficult to obtain.⁴⁸

In the following discussion, we show that the analysis is not so simple. As Part I made clear, intellectual property rights can sometimes help and can sometimes hurt production and innovation, and one must perform an industry-specific analysis to determine which effect will prevail. Therefore, those who wish to suppress a disfavored industry should not be so quick to assume that withholding intellectual property rights will further their objective. Instead, if the industry in question operates well at a low-IP equilibrium, the introduction of strong entitlements might be bad for the industry—and thus good for society.

46. See, e.g., Bartow, *supra* note 4, at 838 (answering yes); Note, *Can Intellectual Property Law Regulate Behavior? A "Modest Proposal" for Weakening Unclean Hands*, 113 HARV. L. REV. 1503, 1503 (2000) (same).

47. See, e.g., Bagley, *supra* note 4 (answering no); Ryan Hagglund, *Patentability of Human-Animal Chimeras*, 25 SANTA CLARA COMPUTER & HIGH TECH. L.J. 51, 74–75 (2009) (answering yes); Thomas A. Magnani, *The Patentability of Human-Animal Chimeras*, 14 BERKELEY TECH. L.J. 443, 510–11 (1999) (same).

48. See, e.g., Bagley, *supra* note 4 (biotechnology); Bartow, *supra* note 4 (pornography); Hellwig, *supra* note 4 (tax planning).

To show how intellectual property rights might be flipped around and used in this counterintuitive way, we examine four industries: two from the patent realm (tax planning and biotechnology) and two from the copyright realm (fashion and pornography). These four industries share two common characteristics. First, each is somewhat socially controversial, in that one can make the case that production and innovation in the industry is bad for society as a whole. Second, each arguably thrives under a low-IP legal regime. In this Part, we show how these two commonalities can combine to make intellectual property a unique regulatory instrument, one that performs a function that is the exact antithesis of its usual role.

Before we proceed, one crucial caveat is in order: Our goal here is not to prove that any of our four exemplar industries has a negative effect on social welfare. Instead, we simply point out that some reasonable people think that they do—and if these people are correct, then intellectual property rights that retard rather than promote production and innovation in these industries are a good thing. In short, the normative judgment that these industries are “bad” is our premise, not our conclusion.

A. Patent Failure as Patent Success

We begin with two industries that fall within patent's reach: tax planning and biotechnology. We will spend more time on tax planning, as it represents the first opportunity to apply our theory to a real-world example. The biotechnology discussion will be comparatively brief.

Both topics, however, are equally timely. Over the past several years, the patentability of tax planning has been the subject of congressional hearings, draft legislation, proposed IRS rules, and rigorous scholarship.⁴⁹ And the recent debate over the funding of research into stem cells and interspecies chimeras is but one example of how controversial innovation in biotech has become.⁵⁰ Moreover, patentability in both industries is implicated by the grant of certiorari

49. See, e.g., S. 2369, 110th Cong. (2007); *Hearing on Issues Relating to the Patenting of Tax Advice: Hearing Before the Subcomm. on Select Revenue Measures of the H. Comm. on Ways & Means*, 109th Cong. (2006) [hereinafter *Tax Patent Hearing*]; *Patented Transactions*, 72 Fed. Reg. 54,615 (Sept. 26, 2007) (to be codified at 26 C.F.R. pts. 1 and 301) (proposing adding tax-planning patents to the category of transactions that must be reported to the IRS); Dan L. Burk & Brett H. McDonnell, *Patents, Tax Shelters, and the Firm*, 26 VA. TAX REV. 981, 1000–03 (2007).

50. See, e.g., David E. Winickoff et al., *Opening Stem Cell Research and Development*, 9 YALE J. HEALTH POL'Y L. & ETHICS 52, 75–81 (2009) (citing the current political debate over stem cells); Tia Sherringham, *Comment, Mice, Men, and Monsters: Opposition to Chimera Research and the Scope of Federal Regulation*, 96 CAL. L. REV. 765, 766 (2008) (identifying the cutting-edge research in interspecies chimeras and the tough policy decisions such research presents).

in *Bilski v. Doll*,⁵¹ which gives the U.S. Supreme Court its first opportunity to opine on the newfound breadth of patent's coverage. In short, the time is ripe to consider new perspectives on how patent law influences innovation in controversial industries.

1. Tax Planning

Tax planning is the purposeful arrangement of financial transactions so as to reduce tax liability.⁵² While tax planning can include many things,⁵³ when we refer to tax planning we mean transactions that exploit imperfect tax rules.⁵⁴ Tax shelters are a prime example—they exist not because the law purposely encourages their use, but because of unintended loopholes in the tax code that allow taxpayers to avoid paying taxes that the legislature intended them to pay.⁵⁵

Many reasonable people claim that tax planning is socially harmful. They argue that it generates unnecessary transaction costs and alters taxpayer behavior for the worse while simultaneously reducing government revenue.⁵⁶ And because only the rich can afford tax planning, it has the effect of shifting a portion of their tax burden onto the rest of society.⁵⁷ As a matter of overall social welfare, then, one can see why we might want to discourage tax planning.

a. A Curious Consensus: Tax Planning and Patent Protection

At first glance, intellectual property law would seem to have little to do with tax planning. As it happens, however, these two seemingly disparate fields have come together over the last decade. It all began in 1998, when the Federal

51. See *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008), cert. granted sub nom. *Bilski v. Doll*, 77 U.S.L.W. 3442 (June 1, 2009) (No. 08-964) (argued Nov. 9, 2009) (focusing on what subject matter is eligible for patent protection).

52. See Hellwig, *supra* note 4, at 1008; David A. Weisbach, *Ten Truths About Tax Shelters*, 55 TAX L. REV. 215, 224 (2002).

53. Tax planning can include mundane activities that ensure compliance with the tax system, such as properly filling out a Form 1040, see Weisbach, *supra* note 52, at 224–25, and actions explicitly incentivized by the tax code, see *id.*; Michael L. Schler, *Ten More Truths About Tax Shelters: The Problem, Possible Solutions, and a Reply to Professor Weisbach*, 55 TAX L. REV. 325, 385–86 (2002) (asserting that the tax planning Congress intends to incentivize is not harmful).

54. See Hellwig, *supra* note 4, at 1008–09; Weisbach, *supra* note 52, at 222.

55. See Mark P. Gergen, *The Logic of Deterrence: Corporate Tax Shelters*, 55 TAX L. REV. 255, 255–58 (2002); Daniel N. Shaviro, *Economic Substance, Corporate Tax Shelters, and the Compaq Case*, 88 TAX NOTES 221, 223–34 (2000).

56. See Gergen, *supra* note 55, at 274; Hellwig, *supra* note 4, at 1007; Daniel N. Shaviro, *Evaluating the Social Costs of Corporate Tax Shelters*, 55 TAX L. REV. 445, 446–47 (2002); Weisbach, *supra* note 52, at 222–23.

57. See Hellwig, *supra* note 4, at 1009–10; Weisbach, *supra* note 52, at 223 n.19.

Circuit decided *State Street Bank v. Signature Financial Group*.⁵⁸ *State Street* was widely perceived as endorsing patent protection for business methods—a significant expansion of the kinds of innovation to which patent law would apply.⁵⁹ Over the ensuing years, the number of patent applications for business methods saw an immediate and dramatic increase,⁶⁰ as did their enforcement.⁶¹

Tax-planning methods were among the many different types of business methods that were patented in the aftermath of *State Street*.⁶² The most recent count identifies forty-eight such patents already issued and at least eighty-one tax-planning applications pending before the Patent Office.⁶³ Tax planners have also had a taste of enforcement.⁶⁴ For example, all attendees at a recent meeting of the American Bar Association's tax section later received a letter indicating that one of the tax-planning strategies they discussed violated a patent claiming a "Stock Option Grantor Retained Annuity Trust" (SOGRATS).⁶⁵ The letter indicated that anyone who used the plan needed to pay royalties or would face a patent infringement suit.⁶⁶ Industry literature also notes that tax

58. 149 F.3d 1368 (Fed. Cir. 1998) (affirming a patent claim describing software used to administer a specific type of mutual fund).

59. See, e.g., Michael J. Meurer, *Business Method Patents and Patent Floods*, 8 WASH. U. J.L. & POL'Y 309, 312–14 (2002).

60. See Allison & Hunter, *supra* note 6, at 730–31 ("The decision [in *State Street*] was quickly followed by a dramatic increase in the number of applications for and grants of business method patents."); Kristen Osenga, *Ants, Elephant Guns, and Statutory Subject Matter*, 39 ARIZ. ST. L.J. 1087, 1089–90 (2007) ("Following the *State Street* decision, patent applications for computer software, Internet applications, and business methods flooded the Patent Office.").

61. See Andrew W. Erlewein, *Protecting Key Business Methods With Patents*, 86 MICH. B.J. 29, 30 (2007) ("In recent years, the number of business method patent infringement lawsuits has increased drastically, as many patent holders have come out of the woodwork to either obtain an injunction or reach a licensing agreement with their competitors.").

62. See Linda M. Beale, *Tax Patents: At the Crossroads of Tax and Patent Law*, 2008 U. ILL. J.L. TECH. & POL'Y 107, 114–15 (describing a linkage between the *State Street* decision and the advent of tax patents).

63. See *Tax Patent Hearing*, *supra* note 49, at 37 [hereinafter *Aprill Statement*] (statement of Ellen Aprill, Assoc. Dean, Loyola Law School, Los Angeles, Cal.), available at <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=5106>; see also Beale, *supra* note 62, at 107 (noting that since *State Street*, "a number of business method patents with tax implications have been granted, and even more business method tax patent applications are pending").

64. See, e.g., Consent Final Judgment Regarding Settlement Agreement, *Wealth Transfer Group v. Rowe*, No. 06 Civ. 00024 (D. Conn. Mar. 9, 2007), available at http://tax.aicpa.org/NR/rdonlyres/D62E55BF-474B-4E5C-94A9-AF140F9D5604/0/WTG_ROW_FINALCONSENTJUDGMENT.pdf (settling a tax patent infringement dispute); Beale, *supra* note 62, at 108.

65. Beale, *supra* note 62, at 108–10 (describing the assertion of this tax patent against the industry).

66. *Id.* at 108; Alan S. Lederman, *Tax-Related Patents: A Novel Incentive or an Obvious Mistake?*, 105 J. TAX'N 325, 327 (2006) (describing the tax-patent owner's intent to aggressively assert the patent).

planners have gotten the message that planning methods are patentable and are responding accordingly.⁶⁷

Almost all tax professionals and tax professors have reacted negatively to tax patents.⁶⁸ Their opposition is rooted in the familiar economic argument that underlies intellectual property law: Patent protection encourages innovation in tax planning.⁶⁹ If tax planning is not good for society, then adding patent law to the mix only serves to reduce social welfare by encouraging more planning activity.⁷⁰

To make matters worse, patent law seems to incentivize the most pernicious forms of tax planning. To qualify for a patent, an innovation must be nonobvious given the current state of the art.⁷¹ This means that patents are only available to those tax-planning methods that are not predictable given our current tax laws.⁷² Yet these are the types of tax plans that are arguably the

67. See, e.g., Lederman, *supra* note 66; Allistair M. Nevius, *AICPA Asks Court to Nullify Tax Patents*, TAX ADVISER, July 2008, at 412; Floyd Norris, *You Can't Use That Tax Idea. It's Patented*, N.Y. TIMES, Oct. 20, 2006, at C1; Paul Devinsky et al., *Whose Tax Law Is It?*, LEGALTIMES, Oct. 16, 2006, available at <http://www.mwe.com/info/pubs/legaltimes101806.pdf>; Deborah L. Jacobs, *Patent Pending*, BLOOMBERG WEALTH MANAGER, May 2005, at 41; Letter From Kimberly S. Blanchard, Chair, N.Y. State Bar Ass'n Tax Sec., to William M. Thomas, Chairman, H. Comm. on Ways and Means, et al. (Aug. 17, 2006) [hereinafter NYSBA Letter], available at http://www.nysba.org/AM/Template.cfm?Section=Tax_Section_Reports_2006&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=28771.

68. See, e.g., *Aprill Statement*, *supra* note 63; *Tax Patent Hearing*, *supra* note 49, at 42 [hereinafter *ACTEC Statement*] (testimony of Dennis I. Belcher, partner, McGuireWoods LLP, Richmond, Va., on behalf of the American College of Trust and Estate Counsel); William A. Drennan, *The Patented Loophole: How Should Congress Respond to This Judicial Invention?*, 59 FLA. L. REV. 229 (2007); Michael Moulton, *Effecting the Impossible: An Argument Against Tax Strategy Patents*, 81 S. CAL. L. REV. 631 (2008); NYSBA Letter, *supra* note 67.

69. See, e.g., *ACTEC Statement*, *supra* note 68; *Aprill Statement*, *supra* note 63; Drennan, *supra* note 68, at 329; Moulton, *supra* note 68, at 638–41.

70. See *ACTEC Statement*, *supra* note 68 (arguing that the patenting of tax plans will likely expand); *Aprill Statement*, *supra* note 63, at 41 (asserting that tax strategies will “proliferate, encouraged by the marketing advantages conferred by patents’ government-granted monopoly and presumption of validity”); Beale, *supra* note 62, at 146 (indicating that tax patents “provide an incentive that is directly counterproductive to the fundamental underlying policies of the tax laws”); Burk & McDonnell, *supra* note 49, at 1001 (“[W]e do need to face up to the likelihood that business method patents will encourage more innovation and diffusion of tax planning strategies in the long run, and that may indeed be disturbing.”); Hellwig, *supra* note 4, at 1027 (“Conferring exclusive rights to tax strategies through the patent system thus will most likely serve to exacerbate the inefficiencies that tax planning engenders.”); Moulton, *supra* note 68, at 658–60 (stating that the incentives created by patent protection of tax plans are socially harmful).

71. 35 U.S.C. § 103 (2006); see also *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 412–15 (2007) (describing the “non-obvious” requirement for patent protection).

72. See *KSR*, 550 U.S. at 401 (“If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability.”); Burk & McDonnell, *supra* note 49, at 999 (noting that tax patents, because of the patentability requirements, are likely to claim “previously unnoticed and probably unintended ‘loopholes’ in the tax system”).

most harmful to society.⁷³ They represent behavior that could not have been intended by Congress because, if it had been, the tax planning would be predictable and thus unpatentable.⁷⁴

If patent protection is the problem, then the solution is obvious—make tax planning categorically unpatentable. Indeed, such is the consensus among those who have studied the issue. They argue in favor of simply defining the scope of patent-eligible subject matter to exclude patents that cover tax planning.⁷⁵ Denying patent protection removes the patent-created incentive to create new tax-planning methods and thus does away with the unfair burdens on tax professionals and taxpayers.⁷⁶ The specific mechanism could be legislative or judicial; legislation could explicitly invalidate any patent that covers tax planning, and the recent grant of certiorari in *Bilski v. Doll*⁷⁷ will give the Supreme Court its first opportunity to rule on the patentability of business methods.

In any event, regardless of whether the problem is solved through legislative or judicial means, there is a consensus supporting the argument that if one believes tax planning is harmful, then tax planning must be denied patent protection.⁷⁸

b. The Consensus Confounded: Reducing Harm With Patents

Contrary to the conventional thinking, however, there is good reason to believe that extending patent protection to tax planning is good social policy—not because tax planning is to be promoted but because it is to be discouraged. As the following discussion shows, patent law imposes at least two distinct costs

73. Hellwig, *supra* note 4, at 1007–08 (ultimately concluding that such tax planning should not be patentable).

74. See Burk & McDonnell, *supra* note 49, at 999.

75. See, e.g., S. 2369, 110th Cong. (2007) (setting forth an amendment to § 101 excluding tax planning from patent protection); Beale, *supra* note 62, at 146–47 (arguing to categorically deny patent protection to tax-reduction strategies); Hellwig, *supra* note 4, at 1028–29 (suggesting that tax patents may be excluded on subject matter grounds); Moulton, *supra* note 68, at 665–67 (same). There have been other proposed solutions as well, such as making an individual immune from patent infringement liability due to tax patents, *see id.* at 662–63, or limiting the available remedies to a tax-patent holder, *see Drennan, supra* note 68, at 329–31. There is also the possibility of collateral, administrative remedies. See, e.g., Patented Transactions, 72 Fed. Reg. 54,615 (Sept. 26, 2007) (to be codified at 26 C.F.R. pts. 1 and 301) (proposing the addition of tax-planning patents to the category of transactions that must be reported to the IRS).

76. See sources cited *supra* note 75.

77. See *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008), *cert. granted sub nom. Bilski v. Doll*, 77 U.S.L.W. 3442 (June 1, 2009) (No. 08-964) (argued Nov. 9, 2009).

78. See *supra* note 75.

on tax planners. And from the standpoint of overall social welfare, these costs should be viewed as benefits.

(1) Cost No. 1: Patenting Decreases Availability

Patenting increases the price of tax planning. As we have already discussed, a patent holder will use the exclusive rights the patent provides to increase price and maximize profit.⁷⁹ Those who wish to use a patented tax plan must pay a licensing fee to the patent holder in addition to the other costs of implementing the tax plan.⁸⁰ Accompanying this increase in price is a decrease in the availability of the tax-planning method. A straightforward application of the model set forth in Figure 2 above tells us that raising the price reduces the number of individuals who can afford the patented plan.⁸¹ As a result, fewer taxpayers use the patented method.

The usual response to this analysis is that even if the price goes up for a particular patented tax plan, that plan would not have been available to anyone absent the incentivizing effect of the patent.⁸² Under this view, there is an increase in availability because of a shift from a world in which no such method exists to a world with a high-priced, patented tax-planning method.⁸³

This argument, however, overlooks a crucial fact: The amount of innovation in the tax-planning area was high *before* patent protection entered the picture.⁸⁴ For example, the 1970s and 1980s witnessed a huge boom in the creation of various tax shelters, all occurring well before *State Street* and the rise of business method patents.⁸⁵ The reason we had such innovation without patents is that there were incentive structures already in place that prompted the creation of new tax plans. First, there was the strong individual demand for the

79. See *supra* notes 14–16.

80. See Burk & McDonnell, *supra* note 49, at 996 (“Competitors will have to pay a licensing fee to use a patented strategy . . .”).

81. See *supra* Part I.A (explaining the reduction in quantity created by intellectual property protection).

82. This argument is similar to the rebuttal to the deadweight loss argument against intellectual property protection. See *supra* Part I.A.

83. Burk & McDonnell, *supra* note 49, at 1003–04 (concluding that “[g]iven the general focus of most tax scholars on trying to discourage too much use of tax investment strategies, encouraging such [tax-planning] strategies through patent policy does seem rather odd”).

84. See *Aprill Statement*, *supra* note 63, at 41 (“[I]t would be hard to identify a subject less in need of further innovation than tax planning.”); Moulton, *supra* note 68, at 656 (“Ample incentives exist, in the absence of patent protection, for individuals to seek out new compliant tax-saving strategies.”); NYSBA Letter, *supra* note 67.

85. For an example of such a method, see George Cooper, *The Taming of the Shrewd: Identifying and Controlling Income Tax Avoidance*, 85 COLUM. L. REV. 657, 675–76 (1985).

reduction of tax liability.⁸⁶ Tax professionals attempted to meet this demand by producing more effective plans that provided greater tax savings. Second, tax professionals availed themselves of another intellectual property regime that incentivizes tax planning: trade secret protection.⁸⁷ As long as tax planners kept their methods confidential,⁸⁸ they could sue anyone who misappropriated the methods for monetary damages and a possible injunction.⁸⁹

High consumer demand and the availability of trade secret protection combined (and continue to combine) to incentivize the creation of new tax-planning methods. Accordingly, prior to *State Street*, the industry was probably already at, or near, the peak of its innovation curve.⁹⁰ In short, tax planning is a low-IP industry; it thrives without the benefit of strong private entitlements over the information goods it produces.

If innovation is high without patent protection, then the availability of tax planning may well decrease when protection is granted.⁹¹ Society suffers the deadweight loss identified in Figure 2, representing the amount of tax planning that does not take place because of patent protection.⁹² And because there are other forces driving tax-planning innovation, such as taxpayer demand and trade secret protection, the offsetting upside is not present because patent does not provide a needed incentive to innovate. In such a circumstance, the introduction of patent rights truly does decrease the overall use of tax planning.

86. See *Aprill Statement*, *supra* note 63 (“Existing economic incentives already provide ample inducement for the development, promotion, and implementation of tax planning strategies.”).

87. See Burk & McDonnell, *supra* note 49, at 992–93.

88. Secrecy is, unsurprisingly, a condition of trade secret protection. UNIF. TRADE SECRETS ACT § 1(4)(i) (1986). Tax planners require their clients to keep the plans confidential. See Andrew Franklin Peterson, *Trade Secrets and Confidentiality: Attorney Ethics in the Silent World of Tax Planning*, 17 *BYU J. PUB. L.* 163 (2002). The tax return itself would not necessarily breach the secrecy although a taxpayer might have to file IRS Form 8886 and disclose that he or she entered into a confidential transaction. See *Treas. Reg.* § 1.6011-4(b)(3) (2009) (defining a “confidential transaction”); *id.* § 1.6011-4(d) (requiring that Form 8886 be filed with the tax return).

89. See UNIF. TRADE SECRETS ACT §§ 2–3; RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 44–45 (1995).

90. See *supra* Part I.B.

91. This is the same analysis that makes deadweight loss such a concern for intellectual property law—if the underlying subject matter is something we want society to have access to. See *supra* Part I.A. Here, however, we want to limit access, so this introduction of true deadweight loss is not a drawback but a gain.

92. This might not be totally true because trade secret protection gives the tax-plan creator some access to supracompetitive pricing, or pricing higher than a competitive market could sustain. However, trade secret protection is not as strong as patent protection, and thus the market control is not as absolute. See Mark A. Lemley & David W. O’Brien, *Encouraging Software Reuse*, 49 *STAN. L. REV.* 255, 297 (1997) (“Because of the strong rights patent law provides, the standards for obtaining a patent are higher than those for obtaining a copyright or a trade secret.”).

Patent protection also causes a decrease in the quantity of tax planning in more indirect ways. First, the overall cost of tax planning increases.⁹³ Because there is a chance that any tax plan is covered by an existing patent, tax planners need to engage in preclearance searching and analysis before assisting clients;⁹⁴ otherwise, both the tax planner and the client face infringement liability.⁹⁵ (This risk avoidance is particularly likely given that tax planners are governed by their own ethical rules—either the professional responsibility rules of attorneys or the professional rules of the IRS⁹⁶—and need to maintain their reputations in an industry in which they are repeat players.⁹⁷) Such clearance activity is costly, and will force tax planners to pass these costs to their clients or get out of the business altogether.⁹⁸ Both outcomes reduce the quantity of overall tax planning regardless of patentability; either the price of tax planning increases and reduces demand, or the number of tax planners available to provide services drops, limiting access to tax-planning services.⁹⁹

Second, patent's proprietization of tax planning allows public interest groups to patent tax-planning methods for the sole purpose of preventing anyone from using them.¹⁰⁰ For example, there are nonprofit organizations whose goal is to bring about tax reform and expose tax abuses.¹⁰¹ The patenting of tax-planning methods offers them a way to engage in private policing—by acquiring the patent, refusing to license it to anyone, and actively enforcing it against infringers. One commentator even suggests that the government may

93. Hellwig, *supra* note 4, at 1013–17.

94. *Aprill Statement*, *supra* note 63, at 38 (“As a result, taxpayers, their advisers, and others may need to begin considering whether to conduct patent searches in connection with any tax planning activity, whether to seek expert advice, and depending on the results, what course of action to pursue in response to a possible patent claim.”).

95. Patent infringement exposes the tax planner and taxpayer to monetary damages and an injunction against further use of the patented tax plan. 35 U.S.C. §§ 283–284 (2006). There is also the possibility of treble damages for willful infringement and the payment of the patentee’s attorneys’ fees. *Id.* §§ 284–285.

96. See *Aprill Statement*, *supra* note 63, at 38 (citing the possible malpractice exposure).

97. See Hellwig, *supra* note 4, at 1013–17, 1021–22 (noting that “[p]rofessional reputation plays a critical role in the tax planning community”).

98. See Burk & McDonnell, *supra* note 49, at 995–97; Hellwig, *supra* note 4, at 1013–17.

99. The latter case occurs either because the patentee can now increase price further because of less competition or because there is a finite pool of tax planning that can be provided by the current stock of tax planners. See, e.g., Hellwig, *supra* note 4, at 1026–27 (citing the limitation on choice of counsel caused by tax patents).

100. Cf. *id.* at 1017–18 (mentioning the possibility but dismissing it as unlikely).

101. See, e.g., Richard L. Doernberg & Fred S. McChesney, *On the Accelerating Rate and Decreasing Durability of Tax Reform*, 71 MINN. L. REV. 913 (1987) (describing tax legislation as the product of interactions between Congress and various interest groups). Tax Foundation, About Us, <http://www.taxfoundation.org/about/> (last visited Mar. 25, 2010) (“The mission of the Tax Foundation is to educate taxpayers about sound tax policy and the size of the tax burden borne by Americans at all levels of government.”).

engage in the same activity by hiring others to develop tax plans that are then patented to exclude any use.¹⁰² Such activity would squelch any use of the patented tax planning. This sort of tactic is not as unlikely as it might sound; interest groups outside the tax area have acquired patents for the sole purpose of completely denying anyone the ability to engage in the patented activity for the greater good¹⁰³—much like environmentalists who purchase carbon emissions credits and then decline to use them.¹⁰⁴

Finally, patenting may decrease the amount of tax planning because it forces disclosure of tax loopholes, which regulators can then close. When trade secret was the preferred form of protection, the IRS had a hard time identifying tax-planning methods; after all, trade secrets had to be kept secret.¹⁰⁵ Patents have the opposite effect because a patentee must reveal the best mode of practicing the invention, and must do so in a universally accessible document for the world to see: the patent itself.¹⁰⁶ The filing of tax-planning patents therefore helps regulators identify and fill loopholes in the tax code¹⁰⁷ and thus decreases the overall availability of tax planning.¹⁰⁸ Again, this point is not

102. See Hellwig, *supra* note 4, at 1017 (setting forth this hypothetical).

103. As discussed further below, individuals have filed patents for the purpose of stopping any use of the claimed subject matter. See Gregory R. Hagen & Sébastien A. Gittens, *Patenting Part-Human Chimeras, Transgenics and Stem Cells for Transplantation in the United States, Canada, and Europe*, 14 RICH. J.L. & TECH. 11, 33–34 (2008) (discussing how Stuart Newman and Jeremy Rifkin filed a patent application on the production of “human-animal chimeras” because they were opposed to such technology).

104. See Jonathan Remy Nash & Richard L. Revesz, *Markets and Geography: Designing Marketable Permit Schemes to Control Local and Regional Pollutants*, 28 ECOLOGY L.Q. 569, 658–59 (2001).

105. UNIF. TRADE SECRETS ACT § 1(4) (1986). Some disclosure was required by IRS regulations, but it was fairly minimal. See Treas. Reg. § 1.6011-4(b)(3) (2009). This secrecy was important to the value of tax planning, particularly tax shelters. Hellwig, *supra* note 4, at 1024–25.

106. See 35 U.S.C. § 112 para. 1 (2006) (best mode requirement); *id.* § 122(b)(1)(B) (2006) (publication requirement). However, it is worth noting that there are several exceptions to the publication requirement. See *id.* §§ 122(b)(2)(A), (b)(2)(B)(i).

107. Burk & McDonnell, *supra* note 49, at 1000–01 (“Another possible positive effect is on public disclosure of tax planning strategies, which may affect the ease of Service enforcement.”).

108. Admittedly, even with patent protection now available, some tax planners will stay with trade secret protection. However, some clearly will not, as shown by the rash of tax patents currently being filed, issued, and enforced. See *supra* notes 63–64. The fact that some are patenting will prompt others to do as well (or at least to publish defensively), so as to have some protection against the patents. See, e.g., Hellwig, *supra* note 4, at 1022–23 n.54 (discussing the possibility of defensive publishing in the tax-patent area); Ronald J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, 83 TEX. L. REV. 961, 990 (2005) (reporting on defensive patenting behavior in the software industry); Gideon Parchomovsky, *Publish or Perish*, 98 MICH. L. REV. 926, 928 (2000) (discussing defensive publishing). There is an argument that moving to patent protection from trade secret protection will lead to more rapid diffusion of ideas because the patent system is a more efficient form of protection. See Burk & McDonnell, *supra* note 49, at 995. However, this argument is overcome by the many ways in which the patent process limits innovation and restricts the ability of competing firms to build on the developments of others. See *infra* Part II.A.2.

merely theoretical; the IRS has already begun cooperating with the Patent Office to identify abusive tax-planning methods.¹⁰⁹

(2) Cost No. 2: Patenting Decreases Innovation

The patenting of tax planning is likely to have another negative effect on the industry by stifling future innovation in the field. As we have already discussed, there is considerable evidence that the industry operates well at a low-IP equilibrium—that the industry was already close to the peak of its innovation curve without patent protection.¹¹⁰ If so, adding patent protection pushes the industry over the top and onto the curve's downside. In other words, the costs that patent protection imposes on future innovators will outweigh the benefits to current innovators.¹¹¹

Two aspects of the tax-planning industry support this outcome. First, tax planning is cumulative in nature. Developing new tax-planning methods is an organic process, with new methods relying and building upon old ones.¹¹² Development also involves borrowing tax-planning strategies from one area and adapting them to another.¹¹³ As Robert Merges and Richard Nelson have shown, the more cumulative an industry's innovation, the higher the likelihood that patent protection will impede follow-on developments.¹¹⁴ Introducing patent protection into a cumulative-innovation industry such as tax planning is therefore likely to reduce innovation rather than increase it. Each new patent becomes a barrier to any downstream innovation that wishes to build upon the patented method.¹¹⁵ Patents inhibit others from freely accessing previous

109. See *Tax Patent Hearing*, *supra* note 49, at 12–15 (statement of Mark Everson, IRS Comm'r) (explaining the cooperation between the IRS and the USPTO and also the IRS's affirmative searching of patents for potentially abusive tax-planning methods).

110. See *supra* text accompanying notes 84–90.

111. See *infra* Part I.B.

112. See Burk & McDonnell, *supra* note 49, at 997 (“[C]reating new tax planning strategies is a cumulative and modular process that builds upon earlier strategies.”); Hellwig, *supra* note 4, at 1023 (“[T]ax strategies in the past have been incrementally refined through replication . . .”).

113. See Burk & McDonnell, *supra* note 49, at 997 (discussing the modular nature of tax planning). The percolation of ideas among tax professionals plays a key role as well with tax planners exchanging notes and concepts through conferences, meetings, and tax periodicals. See *Aprill Statement*, *supra* note 63, at 38 (“There is an astonishing array and number of meetings, conferences, conventions, and listservs where tax planning ideas are shared.”); Hellwig, *supra* note 4, at 1022.

114. Merges & Nelson, *supra* note 31, at 872–78 (explaining the negative impact patent protection can have on cumulative industries).

115. Burk & McDonnell, *supra* note 49, at 997, 1001; Hellwig, *supra* note 4, at 1023 (“Whereas tax strategies in the past have been incrementally refined through replication, the fear of patent infringement would pose a significant obstacle to downstream improvement of a patented technique.”).

tax-planning methods and can thus slow down, and perhaps in some instances entirely halt, further tax-planning development.

Second, tax planning tends to be modular. A new plan will often take parts from various previous plans and combine them in a different way.¹¹⁶ Introducing patents into such a modularized, multicomponent innovation environment raises the specter of an anticommons: If different components of a single tax-planning method are patented by different individuals, implementing the combined method becomes difficult.¹¹⁷ The developer of the new plan must get clearance from multiple parties, and the more parties and patents in play, the harder it becomes to obtain such clearance without encountering prohibitively large transaction costs.¹¹⁸ Therefore, by inhibiting the development of multicomponent plans, the anticommons effect constitutes another way in which patenting can retard downstream innovation in tax planning.

In combination, the cumulative and modular aspects of tax planning suggest that patent rights will serve only to lessen innovation in the tax-planning field. While patenting may increase private gains for a few early movers, those initial patents will stall future development as the difficulty in navigating the patent thicket deters other developers from developing new tax-planning methods. Not only will future innovation slow down, but taxpayers will also be straddled with subpar tax-planning methods.¹¹⁹

(3) Flipping It Around

We are not the first to recognize the many disadvantages that patent law creates for tax planners. What has gone almost completely unrecognized, however, is that downsides for tax planners can be upsides for society at large. Inefficiency in tax planning means either that the reduction in tax liability is not as great as it could be (a good thing) or that such tax planning costs more to implement (also a good thing).

116. See *supra* notes 112–113.

117. See generally Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in 1 *INNOVATION POLICY AND THE ECONOMY* 119, 121 (Adam B. Jaffe et al. eds., 2001) (stating that the U.S. patent system “is in danger of imposing an unnecessary drag on innovation by enabling multiple rights owners to ‘tax’ new products, processes, and even business methods”); Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition From Marx to Markets*, 111 *HARV. L. REV.* 621 (1998) (foundational article); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCIENCE* 698, 698–700 (1998) (arguing that an increase in private intellectual property rights in biomedical research may reduce the total amount of such research).

118. See Burk & McDonnell, *supra* note 49, at 996–97.

119. See Hellwig, *supra* note 4, at 1022–23.

As shown above, patent law both entrenches current tax-planning methods and limits their availability, forcing those who cannot obtain a license to adopt second-best alternatives.¹²⁰ These alternatives would essentially be the prior art—tax planning that is already known. Such forced adoption is beneficial for society because second-best tax-planning methods suffer from two disadvantages. First, they tend not to decrease the taxpayer's liability as much as the new patented method, and therefore shift fewer costs onto the rest of society. And second, they have been around longer, which means that regulators are more likely to be aware of them and can more easily close the exploited loopholes and more faithfully achieve the socially beneficial objectives of the tax system.¹²¹

Again, some of this reasoning has been articulated by other commentators.¹²² Some have even mentioned the potential upside to extending patent protection to tax plans.¹²³ But no one has followed these points to their natural conclusion: Intellectual property law can play the exact opposite of its traditional role yet still serve the public good. Instead of recognizing that patents will hamper the tax-planning industry, the commentary is unanimous in supporting a denial of patent protection.¹²⁴

Yet if one agrees that tax planning is harmful to society, patent protection may be the best cure for its perceived ills. If tax planning is what we want to avoid, patents can get us there. Granting intellectual property protection converts costs into benefits. Effects typically seen as bad things become good things. Deadweight loss becomes deadweight gain. The downside provides an upside.

120. *Id.* at 1026–27.

121. *Id.* at 1024–25 (noting that the novelty of a tax shelter, and in turn the lack of a “copycat transaction[],” is crucial to prevent detection of the tax planning).

122. See, e.g., Burk & McDonnell, *supra* note 49, at 1000–01; Drennan, *supra* note 68, at 304–19; Hellwig, *supra* note 4, at 1012–23; Moulton, *supra* note 68, at 638–41.

123. See Burk & McDonnell, *supra* note 49, at 999–1001 (considering but dismissing the possibility because they “do not believe that [patents are] likely” to reduce innovation in the tax planning space). Because of their ultimate dismissal of the likelihood that patents will hamper innovation, they conclude that “we do need to face up to the likelihood that business method patents will encourage more innovation and diffusion of tax planning strategies in the long run, and they may indeed be disturbing.” *Id.* at 1001. We obviously do not agree that this is the conclusion based on our own analysis with regard to patent's impact on the industry. Some of Burk & McDonnell's work also cuts against this determination. *Id.* at 1001–02. We, however, just accept as true that innovation in this area is harmful.

124. See, e.g., *id.* at 1001–02; Drennan, *supra* note 68, at 329–30; Hellwig, *supra* note 4, at 1027; Moulton, *supra* note 68, at 667–69.

2. Biotechnology

We turn now to another patent-eligible field of social concern: morally controversial biotechnologies. The discussion here is much the same as the previous discussion about tax planning. First, reasonable people have argued that these technologies are harmful to society. Their argument rests on the perceived immorality of certain forms of biotechnology. The disfavored technologies vary, from DNA sequences to certain medical procedures, from genetically modified foods to human cloning, from stem cell lines to transgenic animals.¹²⁵ The rationales for their disapproval vary as well, although they tend to involve respect for human dignity and autonomy.¹²⁶

Second, assuming *arguendo* that these biotechnologies should be discouraged, there is reason to believe that development in this area thrives under a low-IP regime such that adding patent protection to the mix would impede, rather than promote, production and innovation. As always, this is a counter-intuitive notion. Most scholars who have examined the issue have proposed just the opposite: Exclude the controversial technologies from patent protection in order to curtail their creation and distribution.¹²⁷ In fact, they seek to resuscitate patent's moribund "moral utility" doctrine, which courts once used to deny patent protection to those inventions of questionable morality.¹²⁸

However, just as with tax-planning methods, there is reason to believe that granting patent protection is the best way to limit the development of disfavored biotechnologies. The key insight, again, is that biotechnology appears to be a

125. For a list of samples, see Bagley, *supra* note 4, at 475.

126. See, e.g., *id.* ("The moral controversies surrounding these and other biotech inventions stem from several concerns including those arising from the mixing of human and animal species, the denigration of human dignity, the destruction of potential human life, and the ownership of humans.").

127. See, e.g., Margo A. Bagley, *Stem Cells, Cloning and Patents: What's Morality Got to Do With It?*, 39 NEW ENG. L. REV. 501, 507–09 (2005); Bagley, *supra* note 4, at 475–76 ("The availability of a government imprimatur granting exclusive rights over morally controversial inventions is especially problematic in the area of biotechnology because no one should 'own' and the government should not encourage certain inventions."); Valerie J. Phillips, *Half-Human Creatures, Plants & Indigenous Peoples: Musings on Ramifications of Western Notions of Intellectual Property and the Newman-Rifkin Attempt to Patent a Theoretical Half-Human Creature*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 383 (2005). *Contra* Magnani, *supra* note 47, at 459 ("[E]xcluding controversial technologies from patentability would not prevent their development.").

128. See, e.g., Bagley, *supra* note 4, at 532–39 (suggesting a legislative morality-based limit on patent subject matter eligibility). Use of the moral utility doctrine declined over the course of the twentieth century, see *id.* at 476–77, and the Federal Circuit planted a seemingly final nail in its coffin in 1999 in *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1366–68 (Fed. Cir. 1999) (noting that the utility requirement does not allow "the Patent and Trademark Office or the courts to serve as arbiters of deceptive trade practices"). *But see* Timothy R. Holbrook, *The Expressive Impact of Patents*, 84 WASH. U.L.R. 573, 606–08 (2006) (citing "[a] recent rejection at the PTO office [that] suggests use of morality may yet resurface at the PTO").

low-IP industry; researchers have numerous incentives to produce biotechnologies even in the absence of patent protection. For example, many of these allegedly immoral technologies are foundational information goods—what scientists call “basic research”—the very areas in which government and private funding, rather than patent and commercialization, provide the impetus.¹²⁹ Basic research also often finds its incentive in the standards of tenure at research institutions and the prestige of publication.¹³⁰ As others have observed, this means that basic research exhibits low-IP characteristics.¹³¹

The introduction of patent protection is therefore more likely to *limit* production of and innovation in morally questionable biotechnology.¹³² The argument is essentially the same as in the tax-planning discussion. First, patenting reduces the quantity of the information good available for distribution and use.¹³³ Second, it restricts others’ ability to build upon earlier developments and advance the arguably unethical technology further.¹³⁴ And because the technology in question is so basic and so foundational, patent protection is particularly likely to constrain downstream research and development by limiting further investigation of the biotechnology and any follow-on

129. See, e.g., Bagley, *supra* note 4, at 473, 504–06, 515 (citing examples of cloning and human chimera inventions produced by university researchers); Peter Lee, *The Evolution of Intellectual Infrastructure*, 83 WASH. L. REV. 39, 110 n.376 (2008) (“[I]ntrinsic motivations to create, government funding of basic research, and norms of non-exclusivity in academic science suggest that economic incentives may not be as necessary to produce this primary infrastructure.”). But see Brett M. Frischmann, *The Pull of Patents*, 77 FORDHAM L. REV. 2143, 2146 (2009) (“Given limits in government funding of research—the primary driver of the university science and technology research enterprise—universities have begun to pursue and employ patents aggressively to transfer technology, encourage entrepreneurship, and generate revenues that may support research efforts.”).

130. PRESIDENT’S COUNCIL OF ADVISORS ON SCI. AND TECH., UNIVERSITY-PRIVATE SECTOR RESEARCH PARTNERSHIPS IN THE INNOVATION ECONOMY 35 (2008) (“Current metrics to evaluate the success of university researchers and determine tenure decisions are limited primarily to publications and Federal grants and often fail to recognize other critical factors.”); Melissa J. Alcorn, Note, *Biotechnology Law: A Tale of Peptides and Lasers: Is Integra Lifestyles I, Ltd. v. Merck KGaA the End of the Experimental Use Defense for Biomedical Innovation, or Does § 271(e)(1) of the Patent Act Save the Day?*, 57 OKLA. L. REV. 381, 396 (2004) (“The researcher works for the incentive of publication, tenure, and recognition in their field, not for maximum patent protection.”). But see Frischmann, *supra* note 129, at 2162 n.55 (noting that patents receive consideration in tenure decisions at Texas A&M and that faculty at other universities have pushed for similar policies).

131. See, e.g., Holbrook, *supra* note 128, at 577 (“Research into biological causes of behaviors is inevitable and, indeed, has already begun.”); Arti Kaur Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 NW. U. L. REV. 77, 88–94 (1999) (discussing the strong norms that prompted molecular biology research even without patent protection).

132. See, e.g., Holbrook, *supra* note 128, at 622 (noting that even though the denial of patent protection will not stop the production of such technologies, there are other reasons to deny such protection).

133. See, e.g., *supra* Figure 2 (depicting the static downside to patent protection).

134. See, e.g., *supra* notes 114 & 117.

commercialization.¹³⁵ While such an effect is normally a reason to criticize the patenting of basic research,¹³⁶ here it is seemingly a benefit.

Indeed, a few social advocates have already recognized the benefits of using patents to impede follow-on innovation in biotechnology. For example, two activists have sought to patent a human-animal chimera in order to preclude others from developing that technology further.¹³⁷ And a leading researcher in pursuit of the so-called “gay gene” has stated that he could use his rights to prevent the use of genetic testing for homosexuality if his search is successful.¹³⁸

These efforts are creative, and they demonstrate intellectual property’s versatility as an instrument of suppression. But patentees do not have to be social activists for their entitlements to impede the biotechnology industry. If sufficient incentives exist without patent protection, introducing such protection will gum up the works of an otherwise well-oiled machine. Even those who want to profit from morally questionable biotechnologies will see their research costs rise. So if these forms of biotechnology are to be discouraged—if we would like to see this machine break down—then patent may be just what the doctor ordered.

B. Righting Wrongs With Copyright

The following discussion considers two more industries: fashion and pornography. Each industry involves the kind of creative expression that usually falls within copyright’s reach. Each also arguably possesses some socially harmful characteristics, such that production and innovation should be discouraged. As we will see, for that purpose copyright protection may serve as the most effective regulatory instrument.

1. Fashion

Fashion is unique among our four exemplar industries for two reasons. First, it is the only industry that is not currently covered by one of the “big two” intellectual property regimes. Second, the putative evils of fashion are not as obvious as those of the other three regimes. For this reason, the following discussion will be structured differently from the others; we will begin with an

135. See Merges & Nelson, *supra* note 31, at 873–74; Rai, *supra* note 131, at 115, 127–35.

136. See, e.g., Heller & Eisenberg, *supra* note 117, at 698–99 (arguing that patents can deter innovation in the field of basic biological research).

137. Hagglund, *supra* note 47, at 66–69.

138. Holbrook, *supra* note 128, at 595 & n.135 (citing DEAN H. HAMER & PETER COPELAND, *THE SCIENCE OF DESIRE* 219 (1994)).

analysis of how fashion thrives despite the lack of intellectual property protection, and then we will consider the arguments in favor of suppressing fashion for the common good.

a. Fashion and Intellectual Property

Fashion is big business. Revenue estimates range up to \$350 billion domestically and \$862 billion worldwide.¹³⁹ Fashion also enjoys remarkably consistent growth; sales of apparel have registered yearly increases for some sixty straight years.¹⁴⁰ The designers who create each season's fashions have had similar success, with an average increase in their annual revenues of 7 percent since 1997¹⁴¹—a trend that is projected to continue despite the recent economic downturn.¹⁴²

As scholars have pointed out, all of this success occurs without significant intellectual property protection for the designs at the heart of the fashion world.¹⁴³ Copyright's "useful article" doctrine renders it largely ineffective in protecting fashion design,¹⁴⁴ while design patents take too long to acquire and have prohibitively high threshold requirements.¹⁴⁵ Trademark law provides some protection for a luxury brand, but not for the actual design of clothing or accessories.¹⁴⁶ As a result, copying is the industry norm. As soon as a particular design catches the public's fancy, imitations fill the racks at stores across the

139. Susanna Monseau, A Review of European Design Protections Does Not Support the Fashion Industry Contention That Congress Should Single Out Fashion for Special Design Protection 9–10 (Apr. 16, 2009) (unpublished manuscript, on file with author).

140. See A Bill To Provide Protection for Fashion Design: Hearing on H.R. 5055 Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary, 109th Cong. 87 (2006) (testimony of Christopher Sprigman, Associate Professor, University of Virginia School of Law).

141. IBISWORLD, FASHION DESIGN SERVICES IN THE U.S. 3, 29 (2008 & Update 2009).

142. *Id.* at 3 (projecting return to positive growth through 2013 after negative growth in 2009).

143. See Jonathan M. Barnett, Essay, *Shopping for Gucci on Canal Street: Reflections on Status Consumption, Intellectual Property, and the Incentive Thesis*, 91 VA. L. REV. 1381 (2005) [hereinafter Barnett, Essay]; C. Scott Hemphill & Jeannie Suk, *The Law, Culture, and Economics of Fashion*, 61 STAN. L. REV. 1147 (2009); Raustiala & Sprigman, *supra* note 5; Jonathan M. Barnett et al., *The Fashion Lottery: Cooperative Innovation in Stochastic Markets* 24 (U.S.C. Legal Stud. Research Paper Series No. 08-21, 2008) [hereinafter Barnett et al., *Fashion Lottery*]. We refer here to U.S. law; there are stronger protections in Europe. See *infra* notes 234–237 and accompanying text.

144. For an explanation of the useful article doctrine and its application to fashion, see Joseph E. McNamara, *Modifying the Design Piracy Prohibition Act To Offer "Opt-Out" Protection for Fashion Designs*, 56 J. COPYRIGHT SOC'Y U.S.A. 505, 510–13 (2009), and Raustiala & Sprigman, *supra* note 5, at 1699–1700.

145. McNamara, *supra* note 144, at 513–15; Raustiala & Sprigman, *supra* note 5, at 1704–05. The average design patent application takes more than eighteen months to work its way through the Patent Office. *Id.* at 1704.

146. Barnett et al., *Fashion Lottery*, *supra* note 143, at 8–10; Raustiala & Sprigman, *supra* note 5, at 1700–04.

consumer spectrum, from high-end Rodeo Drive boutiques to the low-end retailers where law professors shop.¹⁴⁷

How then does the industry thrive? After all, fashion designs are classic information goods, seemingly subject to the innovation-incentive problem at the heart of intellectual property law. So why do designers continue to come out with new fashions when they know that others can immediately free-ride on their creativity?

In 2006, Kal Raustiala and Chris Sprigman provided an answer: Untrammelled copying facilitates both the creation and the demise of the trends that fuel fashion purchases.¹⁴⁸ First, copying allows designers and retailers to try out various new designs until the community collectively coalesces around one in particular, thus defining a new trend and casting aside the many alternatives offered up for that season. This impenetrable process—which Raustiala and Sprigman call “anchoring”—is possible only because intellectual property law leaves the participants free to sample various candidates until they settle on a winner.¹⁴⁹

But trends are born to die, and intellectual property law's neglect of fashion increases the speed at which a trend fades. Once a winning fashion emerges, the lack of legal restrictions on copying causes it to diffuse rapidly to other designers and retailers. This in turn hastens the demise of the trend, as the fashion's ubiquity reduces the novelty that made it trendy in the first place.¹⁵⁰ (If you are wearing low-rise jeans, you are hip. If you and your mother are wearing low-rise jeans, you are terminally square.¹⁵¹) The cycle then starts anew with another round of anchoring—the Next Big Thing.

For example, a new trend might start with a household-name designer charging a glitterati client six figures for a single item of haute couture—perhaps a dress for Donald Trump's wife to wear to the Emmys.¹⁵² The item is

147. Raustiala & Sprigman, *supra* note 5, at 1705–15. This copying dynamic has existed since at least the 1800s. See Caroline A. Foley, *Fashion*, 3 *ECON. J.* 458, 471 & n.5 (1893) (noting that “it is not impossible, by close observation of the inception of a taste, and estimation of the average rate of diffusion both in time and space, to anticipate its final stage, as a want of the million, and reap a rich harvest of profit” and giving a real life example from France).

148. Raustiala & Sprigman, *supra* note 5, at 1722; see also Barnett, *Essay*, *supra* note 143, at 1398–1401 (describing a similar phenomenon for bags and fashion accessories).

149. Raustiala & Sprigman, *supra* note 5, at 1728–32; see also Barnett et al., *Fashion Lottery*, *supra* note 143, at 31–38 (describing the intricate process of sharing design ideas throughout the design community).

150. Raustiala & Sprigman, *supra* note 5, at 1719–20. Raustiala and Sprigman call this “induced obsolescence.” *Id.* at 1722.

151. Your kids think the same about what you are wearing.

152. A haute couture evening gown can cost upwards of \$150,000. Elizabeth Hayt, *The Hands That Sew the Sequins*, *N.Y. TIMES*, Jan. 19, 2006, at G1.

purchased not because it is any more beautiful or durable than the alternatives, but because its novelty, uniqueness, and price brazenly proclaim the elite status of the purchaser.¹⁵³ The designer might then offer a ready-to-wear version of the dress that is more affordable but still far out of the reach of the average consumer. This move allows the wealthy to get in on the game and display their status too.

Because the law does not prohibit the copying of designs, others in the industry are free to knock off the design. If enough do so, a new trend emerges. Rival fashion houses would then make their own versions of the dress, as would mass-market retailers who sell to those on the lower rungs of the status ladder. Everyone could jump on the bandwagon and be seen wearing what the stars wear. As the fashion diffuses into this broader population, however, its original appeal dissipates; the elites who started the trend cannot signal their status using a dress that can be found on the racks at Wal Mart.¹⁵⁴ They therefore adopt some new style, and the cycle begins again.

Of course, not all trends originate in status-seeking, nor do they all start with the elite and trickle down to the unwashed. As Scott Hemphill and Jeannie Suk have pointed out, fashions can also emerge from a more decentralized process that involves the accretion of individualized choices into a collective movement—for example, military styles coming into vogue during wartime.¹⁵⁵ They also note that following a trend does not mean wearing exactly the same thing as everyone else; rather, each follower wants to express himself or herself as an individual while remaining within the fashion.¹⁵⁶ Skinny jeans may be in,¹⁵⁷ but within the category of skinny jeans consumers can differentiate themselves by choosing from a variety of washes, colors, and textures.

For present purposes, however, these distinctions do not matter, because regardless of where trends originate, the demand for new fashions—the demand for production and innovation in the industry—depends on how quickly trends

153. One researcher asserts that the female clientele for haute couture comprises no more than five hundred women worldwide. VERONICA MANLOW, *DESIGNING CLOTHES: CULTURE AND ORGANIZATION OF THE FASHION INDUSTRY* 100 (2007).

154. We should point out that there may be gradations of copying even among low-end retailers. See Hemphill & Suk, *supra* note 143, at 1172–74 (labeling H&M and Zara “fast-fashion designers” and Forever 21 a “[f]ast-fashion copyist[]”). Indeed, some low-end retailers have partnered with household-name designers to create their own distinctive lines (e.g., Kohl’s and Vera Wang, Wal Mart and Norma Kamali, and, until recently, Target and Isaac Mizrahi).

155. *Id.* at 1157–59. To be fair, Raustiala and Sprigman recognize a similar dynamic. Raustiala & Sprigman, *supra* note 5, at 1733 (“Today, many trends bubble up from the street, rather than down from major houses.”).

156. Hemphill & Suk, *supra* note 143, at 1166–68.

157. Not that the authors would know.

come and go.¹⁵⁸ Whether you follow the latest fashion because you want to dress like a movie star or because you are caught up in the spirit of the times, the result is the same: You want to wear the same basic style as everyone else.¹⁵⁹ And when unregulated copying causes that style's novelty to wane, you will look for the next style.

Paradoxically, then, fashion is a form of innovation that thrives in the presence of—indeed, because of—the lack of legal prohibitions against piracy. Fashion's low-IP status causes trends to cycle in and out more quickly, which increases the demand for new fashions, which means more innovation and a greater supply of fashion goods than would occur in the absence of unregulated copying.¹⁶⁰

So what would happen if we increased intellectual property protection for fashion design? Suppose we removed the doctrinal barrier that stands between fashion and robust copyright protection.¹⁶¹ The result, presumably, would be

158. In any event, the distinctions are small. See Kal Raustiala & Christopher Sprigman, Response, *The Piracy Paradox Revisited*, 61 STAN. L. REV. 1201, 1206–09 (2009) (summarizing the many ways in which Hemphill and Suk agree with their approach); see also Raustiala & Sprigman, *supra* note 5, at 1733 (“Our argument depends less on who determines what is desirable than on how a regime of low IP protection, by permitting extensive and free copying, enables emerging trends to develop and diffuse rapidly, and, as a result of the positionality of fashion, to die rapidly.”).

159. See, e.g., Hemphill & Suk, *supra* note 143, at 1164–65 (stating that consumers want to be “in fashion” and “part of a trend” and that differentiation occurs within these collective movements).

160. Hemphill and Suk disagree with this proposition. First, they argue that “close copying”—the creation of exact knock-offs of apparel designs—does little to fuel the fashion cycle and that a narrow intellectual property right forbidding close copying would accordingly help the industry. *Id.* at 1180–90. In our view, however, Raustiala and Sprigman have the better argument, for reasons they explain more ably than we could. See Raustiala & Sprigman, *supra* note 158, at 1213–16 (responding to the Hemphill & Suk article). Second, Hemphill and Suk claim that many consumers are “lifecycle pricers” whose fashion expenditures remain stable regardless of how quickly fashions come and go, which means that a faster cycle would reduce industry profits. Hemphill & Suk, *supra* note 143, at 1182–83. Again, we believe that Raustiala and Sprigman convincingly rebut this assertion, see Raustiala & Sprigman, *supra* note 158, at 1211 n.21; we add only that the notion of farsighted, rational lifecycle pricing is at odds with consumers' acknowledged tendency to form part of a decentralized collective focused on staying in style, see, e.g., Hemphill & Suk, *supra* note 143, at 1167 (noting that consumers are “ever on the lookout for something new” and for “a fresh basis for asserting commonality”), and indeed is also at odds with the collective action inefficiencies that underlie the basic notion of buying new clothes before one's old clothes wear out, see Barnett, Essay, *supra* note 143, at 1385. A discussion of these issues is not complete, however, without reference to Hemphill and Suk's responses to these and other critiques of their approach. C. Scott Hemphill & Jeannie Suk, Reply, *Remix and Cultural Production*, 61 STAN. L. REV. 1227 (2009).

161. There is precedent for this change. Copyright fails to protect fashion because of the useful article doctrine, which also once stood in the way of protection for architectural works. Architectural works escaped the useful article doctrine when they received their own section 102(a) category in 1990. See Architectural Works Copyright Protection Act, Pub. L. No. 101-650, tit. VII, § 703, 104 Stat. 5089, 5133 (1990). Therefore, to remove the useful article constraint on fashion and bring it within copyright's scope, Congress would simply have to add “clothing” or “apparel” to the list of copyrightable categories

a slowing of the phoenix-like cycle of trends. Anchoring would take longer because designers would no longer be able to try out each other's fashions without a license. And once established, trends would last longer because others could no longer freely copy the fashion as soon as it took hold; the inevitable moment of oversaturation and un-hipness would accordingly be delayed.

This is not to say that everyone in the industry would be worse off in the presence of strong intellectual property rights. Leading designers in particular might do better if the fashion cycle were slower, as they could increase their share of industry proceeds by licensing a single design over a longer period. Indeed, in the mid-1900s, French design houses forbade Americans access to Parisian fashion shows unless the Americans agreed, (among other things) to stagger deliveries of the fashions they copied¹⁶²—an obvious attempt to optimize the fashion cycle for designers by slowing it down.

If fashion is a social negative, however, the question is whether the fashion industry *as a whole* would be better off or worse off under a high-IP regime. Designers may be able to cut themselves a bigger piece of the pie, but that means smaller pieces for the retailers who could previously copy without seeking permission. Part III covers these internal industry dynamics in more detail; for now, suffice it to say that the slower cycle that results from the introduction of private entitlements and the rent dissipation that accompanies any introduction of transaction costs into an otherwise frictionless environment suggest that the overall size of the pie shrinks in the presence of intellectual property rights.¹⁶³ In the end, then, fashion, like tax planning and biotech, is an industry in which intellectual property law's incentivizing effect is not necessary and in which strong private entitlements may well impede, rather than impel, the creativity and innovation that intellectual property law exists to promote.¹⁶⁴

in 17 U.S.C. § 102(a) (2006). Note, however, that recent proposals have involved more of a *sui generis* regime. See *infra* note 269.

162. See Raustiala & Sprigman, *supra* note 5, at 1696.

163. See Barnett et al., *Fashion Lottery*, *supra* note 143 (demonstrating that a high-IP regime would stifle fashion innovation).

164. We realize, of course, that other outcomes are possible—that protecting fashion with strong intellectual property entitlements might not necessarily slow down the industry. In Part III, *infra*, we deal with those alternatives that fashion has in common with other low-IP industries. For now we merely note in passing that those who have studied the interplay of intellectual property and fashion tend to share our view that stronger entitlements would impede innovation and reduce production. See Barnett, Essay, *supra* note 143, at 1418; Kal Raustiala, *How Copyright Law Could Kill the Fashion Industry*, NEW REPUBLIC, Aug. 13, 2007, <http://www.tnr.com/article/fashion-victims>. Hemphill & Suk disagree slightly, as discussed above. See *supra* note 160.

b. Fashion as Waste

We turn now to the issue of whether fashion is an industry in which production and innovation should be discouraged. If a rapid cycle of trends is good for society, then fashion's current low-IP equilibrium is unobjectionable. Introducing strong entitlements into the world of fashion would therefore be a mistake.

For hundreds of years, however, theorists have contended that any system that requires frequent expenditures to stay in style is inherently wasteful. The idea is most often associated with Thorstein Veblen's notion of conspicuous consumption, under which adoption of the latest trend is simply expense for expense's sake.¹⁶⁵ Earlier observers, from John Locke to John Rae, also noted the same phenomenon.¹⁶⁶ Whatever the source, the argument is the same: Any benefit that comes from adopting a new fashion is relative, because the value of wearing a particular item of clothing depends on who else is wearing it. Whether the motivation to obtain the new fashion is rooted in status-seeking or in the desire to be part of a collective movement, one must wear the same style as one's peers.¹⁶⁷ In either case, when the latest trend takes hold, everyone follows it.

If true, this argument means that fashion requires consumers to periodically spend money in order to stay in the same place. We buy new shoes not because our old ones are worn out, but because our status in society or our membership in a social group compels us to conform to the latest shoe trend. (As Shakespeare said, "[T]he fashion wears out more apparel than the man."¹⁶⁸). And because our peers buy the same shoes, our purchase merely maintains, rather than changes, our social standing. Juliet Schor deftly described the waste inherent in such positional purchasing: "Like standing up in a crowd to get a better view, it stops working once others do it too. In the end, the view is the same, but everyone's legs are tired."¹⁶⁹

165. THORSTEIN VEBLÉN, *THE THEORY OF THE LEISURE CLASS* 118–31 (Houghton Mifflin 1973) (1899).

166. See Letter From John Locke to Some Member of Parliament (1691), Some Considerations of the Lowering of Interest, and Raising the Value of Money, in 4 *THE WORKS OF JOHN LOCKE* 2, 58–59 (12th ed. London, C. Baldwin 1824); JOHN RAE, *THE SOCIOLOGICAL THEORY OF CAPITAL* 245–76 (Charles Whitney Mixter ed., MacMillan Co. 1905) (1834).

167. For an insightful economic analysis of the dynamics of purchases to stay "in style," see H. Leibenstein, *Bandwagon, Snob, and Veblen Effects in the Theory of Consumers' Demand*, 64 *Q.J. ECON.* 183 (1950).

168. WILLIAM SHAKESPEARE, *MUCH ADO ABOUT NOTHING* act 3, sc. 3.

169. JULIET B. SCHOR, *THE OVERSPENT AMERICAN: UPSCALING, DOWNSHIFTING, AND THE NEW CONSUMER* 107 (1998); accord RAE, *supra* note 166, at 273; MELVIN WARREN REDER, *STUDIES IN THE THEORY OF WELFARE ECONOMICS* 65–67 (1947); Barnett, Essay, *supra* note 143, at 1416–17.

If one accepts this argument, one might conclude that all positional consumption, no matter how frequent or infrequent, represents a social evil that should be abolished.¹⁷⁰ Or one might argue that the positionality dynamic is evidence that fashion is different in kind from other forms of innovation—that it involves a mindless churning of designs rather than the creation of truly new works of expression valued on their merits.¹⁷¹

Here, we need not go that far. First, we doubt that the law could eliminate the human predilection for status-seeking and group identity even if we wished it to. Second, positionality probably makes fashion different from other creative fields only in degree; for example, trends and a desire to express one's self-identity can certainly play a role in decisions about whether to buy certain artwork, listen to certain music, or read certain books.¹⁷² (When you drive down the street with punk rock blaring from your car radio, you are doing more than enjoying the tune.) Therefore, although we assume *arguendo* that Veblen and his adherents are correct, singling out fashion for utter destruction by intellectual property law is neither desirable nor possible.

Instead, our point is more modest. Even if demonstrating one's status or identity through fashion is a societal desideratum, that goal might be achieved more efficiently than the current system allows. Slowing down the pace of innovation in the fashion industry (i.e., slowing down the introduction of new trends) would mean that positional purchases occur less often—a net gain for overall welfare, even if positionality continues to be something that the public values. People would get the same sense of being in style, but for less money.

For our purposes, then, the important point is that the amount of waste increases with the frequency of these episodes of repositioning. Therefore, if the lack of intellectual property protection results in faster trends and higher consumption of fashion products, then strong intellectual property protection

170. See, e.g., ROBERT H. FRANK, CHOOSING THE RIGHT POND 151 (1985) (noting that “emphasizing observable consumption may be highly adaptive from the individual’s point of view [but] is clearly maladaptive from the standpoint of the population as a whole” because “[o]ne individual’s forward move in any hierarchy can occur only at the expense of backward moves by others”).

171. This claim has a long pedigree. One can detect it in Veblen and his predecessors, see *supra* notes 165–166, and in other observers as well, e.g., Foley, *supra* note 147, at 461 (“Fashion cannot claim to express such changes in habits and modes of life as are due to fresh discoveries and to improvements in taste and comfort as such, nor from those consequent on change in physical or social environment.”). But see ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 145–46 n.1 (2d ed. 1891) (“For to arrange costumes beautiful in and of themselves, various and well-adapted to their purposes is an object worthy of high endeavor; it belongs to the same class, though not to the same rank in that class, as the painting of a good picture.”).

172. See Hemphill & Suk, *supra* note 143, at 1152, 1162 (arguing that positionality and trends also influence purchases of creative works outside of fashion); cf. Raustiala & Sprigman, *supra* note 5, at 1689 n.1 (finding insufficient basis for the claim that fashion goods have lower “IP content” than other expressive works).

would slow down that cycle (less innovation), reduce that consumption (lower production), and improve social welfare.¹⁷³ People would still use clothes and fashion accessories to display their status and proclaim their group identity, but they could do so without having to purchase new attire as often. Again, the two major costs of intellectual property—reduced production and impeded innovation—can be turned around and converted into benefits. Downside becomes upside.

2. Pornography

We will now examine a more obviously controversial industry: pornography. As with our other examples, we take no position on whether the industry is bad for society; we simply recognize that some reasonable people believe that it is. For example, several studies suggest that exposure to pornography can have unwelcome effects, particularly on the treatment of women.¹⁷⁴

If we assume that inhibiting the production and consumption of pornography is a worthy societal goal, how might intellectual property law help? The usual answer would be to withhold its protection from pornographic works—and some recent commentators have offered that answer, or something close to it.¹⁷⁵ After all, the theory behind intellectual property law is that its entitlements encourage production and innovation, and that withholding them would presumably have the opposite effect.

173. Jonathan Barnett has made a similar point about social welfare and the fashion cycle, see Barnett, Essay, *supra* note 143, at 1418, and James Grimmelmann had the same thought in commenting on the Raustiala and Sprigman article, see *Is Fashion a Bad?*, Posting of James Grimmelmann to University of Chicago Law School Faculty Blog, http://uchicagolaw.typepad.com/faculty/2006/11/is_fashion_a_ba.html (Nov. 14, 2006, 10:14 EST).

174. See, e.g., DIANA E.H. RUSSELL, DANGEROUS RELATIONSHIPS 113–56 (1998) (reviewing evidence for a causal link between pornography and rape); Edward Donnerstein, *Pornography: Its Effect on Violence Against Women*, in PORNOGRAPHY AND SEXUAL AGGRESSION 53, 63–78 (Neil M. Malamuth & Edward Donnerstein eds., 1984) (summarizing research showing increased aggression toward women after exposure to “aggressive pornography”); Dolf Zillmann & Jennings Bryant, *Effects of Prolonged Consumption of Pornography on Family Values*, 9 J. FAM. ISSUES 518, 540–42 (1988) (finding decreased regard for marriage, fidelity, and procreation after repeated exposure to pornography). Of course, the view that pornography is bad for society, and for women in particular, has its critics. See, e.g., NADINE STROSSEN, DEFENDING PORNOGRAPHY: FREE SPEECH, SEX, AND THE FIGHT FOR WOMEN’S RIGHTS (1995).

175. Ann Bartow has suggested “conditioning copyright registration and enforcement [of pornography] upon showings by producers not simply that performers are eighteen years or older, but also that their performances were consensual and recorded with the understanding that they would be widely distributed.” Bartow, *supra* note 4, at 802. An earlier student note proposed something similar. See Note, *supra* note 46, at 1503 (arguing for “federal legislation that would invalidate a copyright registration or a patent if the creator (or her agent) violated specific criminal laws in the immediate production of the material for which the protection is sought”).

Indeed, until fairly recently, copyright law followed this conventional wisdom and refused to protect pornographic works. This practice originated in England in the early 1800s, when Lord High Chancellor Eldon declined to enforce the copyrights of works that he viewed as immoral (including, most famously, Byron's *Cain*).¹⁷⁶ American courts followed suit, refusing copyright protection altogether for works that were "grossly indecent,"¹⁷⁷ "indelicate and vulgar,"¹⁷⁸ or "lascivious and immoral."¹⁷⁹ As late as 1963, a state court denied common-law copyright to a comic dance routine that involved too many "bumps and grinds" and "pelvic contractions."¹⁸⁰

By the 1970s, however, changing social attitudes and the development of a robust free speech jurisprudence had set the stage for a reexamination of copyright's policy toward pornography.¹⁸¹ That reexamination arrived in the form of *Mitchell Brothers Film Group v. Cinema Adult Theater*,¹⁸² in which the Fifth Circuit held that copyright law should disregard the morality issue entirely.¹⁸³ Since then, no American court has refused copyright protection based on such considerations.¹⁸⁴

The conventional account would suggest that this newfound availability of copyright protection for pornographic works would encourage their production. But as we saw in Part I, if a sufficient incentive exists without an intellectual property entitlement, the addition of that entitlement can actually retard production. Indeed, since the issue first arose in the early 1800s, courts and commentators alike have questioned the wisdom of withholding copyright protection from works whose dissemination is disfavored.¹⁸⁵ After all,

176. *Murray v. Benbow*, (1822) 4 St. Tr. (N.S) 1409 (Ch.).

177. *Martinetti v. Maguire*, 16 F. Cas. 920, 922 (C.C.D. Cal. 1867) (No. 9173).

178. *Broder v. Zeno Mauvais Music Co.*, 88 F. 74, 79 (C.C.N.D. Cal. 1898).

179. *Barnes v. Miner*, 122 F. 480, 489 (C.C.S.D.N.Y. 1903).

180. *Dane v. M&H Co.*, 136 U.S.P.Q. (BNA) 426, 427 (N.Y. Sup. Ct. 1963).

181. *E.g.*, *Miller v. California*, 413 U.S. 15, 24 (1973) (using contemporary community standards to determine whether material was outside the First Amendment's protection).

182. 604 F.2d 852 (5th Cir. 1979) (interpreting the 1909 Copyright Act).

183. *Id.* at 854.

184. Few courts have even discussed the issue. In 1982, the Ninth Circuit followed *Mitchell Brothers* to the letter except that its ruling was based on the 1976 Copyright Act, the statute that governs today. See *Jartech, Inc. v. Clancy*, 666 F.2d 403 (9th Cir. 1982). Only one subsequent case has expressed any doubt about ignoring morality in copyright matters, but it left the issue open and instead disposed of the controversy on other grounds. See *Devils Films, Inc. v. Nectar Video*, 29 F. Supp. 2d 174 (S.D.N.Y. 1998).

185. *E.g.*, *Murray v. Benbow*, (1822) 4 St. Tr. (N.S) 1409 (Ch.) (Eldon, L.C.) ("There is a great difficulty in these cases, because it appears a strange thing to permit the multiplication of copies by the way of preventing the circulation of a mischievous work . . ."); 10 JOHN LORD CAMPBELL, LIVES OF THE LORD CHANCELLORS AND KEEPERS OF THE GREAT SEAL OF ENGLAND 257 (5th ed. 1868) ("So the injunction was refused [in *Southey v. Sherwood*, (1817) 35 Eng. Rep. 1006, 1007-08 (Ch.) (Eldon, L.C.)], and hundreds of thousands of copies of *Wat Tyler*, at the price of one penny, were circulated over the kingdom.").

the absence of copyright liability means that the work can proliferate freely, unimpeded by the artificial scarcity that copyright imposes.

So if withholding protection leads to *more* piracy and thus to *more* dissemination, wouldn't a court want to *grant* protection to disfavored content, as a more effective means of suppression? The obvious response is that granting protection might reduce the proliferation of the particular pornographic work before the court (a good thing), but it would also send a long-term signal to all pornographers that copyright law stands ready to help them profit from their trade (a bad thing). The resulting increase in incentive would more than offset any temporary decrease in the availability of the particular work at issue, causing an increase in production and innovation in the pornography industry as a whole.

Or so the argument goes. Yet the empirical question of whether the disincentive effect outweighs the increase in proliferation has troubled courts since Lord Eldon's time.¹⁸⁶ Commentators have historically downplayed the disincentive effect and instead emphasized the increased proliferation that would result from denying protection.¹⁸⁷ Indeed, the mere fact that "licentious" works were available to be litigated back when the law afforded them no protection proves that copyright's incentive did not play an indispensable role in their production. Pornography's innovation curve apparently begins with a positive value on the Y axis.

Whatever the state of affairs in the past, however, there is good reason to think that the production of pornography today has even less need for copyright incentives. This is not to say that pornography is not profitable, or that some pornographers do not rely on copyright. To the contrary, for-profit pornographers can be extremely aggressive in asserting their intellectual property rights. Indeed, pornographers were involved in so much seminal online intellectual property litigation that one commentator remarked that "[t]he law

186. See *Stockdale v. Onwhyn*, (1826) 108 Eng. Rep. 65, 66 (K.B.); see also *Mitchell Bros.*, 604 F.2d at 862 (rejecting the district court's view "that on the whole the long-term discouragement of the creation of obscene works would outweigh the short-term increase in the dissemination of obscene works caused by the refusal of an injunction"); Bonnie Wilkinson, Recent Development, *Copyright—The Obscenity Defense in Actions To Protect Copyright*, 46 *FORDHAM L. REV.* 1037, 1039 & n.20 (1978) (noting that "disagreement regarding the wisdom of the doctrine" dates to Lord Eldon's time and "is still with us").

187. See, e.g., *Cases of Walcot v. Walker*; *Southey v. Sherwood*; *Murray v. Benbow*, and *Lawrence v. Smith*, *Q. REV.*, July 1822, at 123, 133 (arguing that "[t]he desire of obtaining notoriety, and of producing an effect, are much stronger motives to publication than the mere contingency of profit" and that the first-mover advantage is also a significant incentive for the author); Jeremy Phillips, *Copyright in Obscene Works: Some British and American Problems*, 6 *ANGLO.-AM. L. REV.* 138, 156–57 (1977) (noting that "commerce in [obscene] works is thoroughly lucrative even in the absence of protection").

of cyberspace is largely the law of pornography.”¹⁸⁸ And pornography has long been a reliably profitable business in the risky world of internet commerce.¹⁸⁹

But recent internet trends have not been so favorable to commercial pornographers, and therein lies our argument that copyright’s incentive is of diminished importance to today’s purveyor of erotica. If we are to determine whether copyright protection promotes or retards production of pornography, we cannot focus only on that subset of pornographers who seek to profit from their trade. We must instead examine the total available volume of pornography regardless of its source.

On this issue, the rise of Web 2.0 has had a significant influence.¹⁹⁰ A huge volume of pornography is now available for free on the internet, much of it from amateurs who appear to care little about exploiting their content for profit or excluding anyone from its use.¹⁹¹ This trend worries commercial pornographers,¹⁹² and for good reason. Sales of pornographic videos have been steadily decreasing by at least 15 percent a year since 2005, and online ventures are not making up the difference—a development explicitly linked to the rise of free content on the internet.¹⁹³ Indeed, in early 2009, *Hustler’s* Larry Flynt and *Girls Gone Wild’s* Joe Francis sought a federal bailout for commercial pornographers, à la the financial and automotive industries.¹⁹⁴ Their request was

188. Ann Bartow, *Open Access, Law, Knowledge, Copyrights, Dominance and Subordination*, 10 LEWIS & CLARK L. REV. 869, 881 (2006). Playboy in particular was the plaintiff in many cases that established important online precedents, although newcomer Perfect 10 has been setting the pace more recently. See, e.g., *Perfect 10, Inc. v. Visa Int’l Serv. Ass’n*, 494 F.3d 788 (9th Cir. 2007) (copyright and trademark); *Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, (9th Cir. 2007) (copyright); *Perfect 10, Inc. v. Amazon.com, Inc.*, 487 F.3d 701 (9th Cir. 2007) (copyright); *Playboy Enters. v. Netscape Comm. Corp.*, 354 F.3d 1020 (9th Cir. 2004) (trademark); *Playboy Enters. v. Welles*, 279 F.3d 796 (9th Cir. 2002) (trademark); *Playboy Enters. v. Universal Tel-A-Talk, Inc.*, 48 U.S.P.Q.2d (BNA) 1779 (E.D. Pa. 1998) (trademark); *Playboy Enters. v. AsiaFocus Int’l*, No. Civ. A. 97-734-A, 1998 WL 724000 (E.D. Va. Apr. 10, 1998) (trademark); *Playboy Enters. v. Calvin Designer Label*, 985 F. Supp. 1220 (N.D. Cal. 1997) (trademark); *Playboy Enters. v. Chuckleberry Publ’g, Inc.*, 939 F. Supp. 1032 (S.D.N.Y. 1996) (trademark); *Playboy Enters. v. Frena*, 839 F. Supp. 1552 (M.D. Fla. 1993) (copyright).

189. FREDERICK S. LANE III, *OBSCENE PROFITS* 209 (2000).

190. By Web 2.0, we mean internet applications that encourage interactivity and user input.

191. Bartow, *supra* note 4, at 802 (noting that “[u]ser-generated pornography is a widespread phenomenon on Web 2.0” and that it “[l]ack[s] a corporate presence or conventional for-profit structure”).

192. Sunny Freeman, *Porn 2.0: What Happens When Free Porn Meets Social Networking*, ALTERNET, July 10, 2007, <http://www.alternet.org/sex/56414/?page=entire> (“[T]he ease of posting porn online is causing a panic among some adult film producers, who spend big budgets on big stars, only . . . to see viewers turn to free, amateur porn instead.”).

193. See Tom Johansmeyer, *Dirty Sexy Money*, ATLANTIC, Jan.–Feb. 2009, at 26; Matt Richtel, *For Producers of Pornography, Internet’s Virtues Turn to Vices*, N.Y. TIMES, June 2, 2007, at A1; Claire Hoffman, *Obscene Losses*, PORTFOLIO, Oct. 15, 2007, <http://www.portfolio.com/culture-lifestyle/culture-inc/arts/2007/10/15/YouPorn-Vivid-Entertainment-Profile>.

194. Press Release, Larry Flynt & Joe Francis, *Hustler’s* Larry Flynt and *Girls Gone Wild* CEO Joe Francis Ask for Government Bailout of the Adult Entertainment Industry (Jan. 7, 2009) (on file with authors).

surely tongue-in-cheek, but their assertion that internet competition had recently reduced video revenues by 22 percent was serious.¹⁹⁵

If this trend continues, then copyright will continue to diminish in importance as an incentive for the production of and innovation in pornography, and the industry will become even more low-IP than it already is. And as we demonstrated above, giving intellectual property rights to an industry that has little need for an incentive can be counterproductive because the negative effects of the entitlement predominate—such as the deadweight loss that results from higher prices and lower production.¹⁹⁶ When dealing with a disfavored industry, however, counterproductive is good. If we really do want to discourage the production and consumption of pornography, then any measure that discourages production is a positive, not a negative—a deadweight gain, not a deadweight loss. Rather than taking copyright protection away from pornographic works, then, we should ensure that it endures.

One question remains: Would amateur pornographers bother to exercise their copyrights, given that they do not care about the incentive effect? If not, distribution will be free and dissemination maximized, regardless of whether pornography is protected. A similar question arises in all the industries we discuss in this Article, so we reserve our full answer for Part III.¹⁹⁷ For now, we merely point out that even without enforcement by amateur rightsholders, copyright increasingly interferes with the online distribution of pornography because of the pressure that commercial pornographers exert on the aggregator websites that act as clearinghouses for free content. Such websites disseminate amateur materials (indeed, they are indispensable in that process),¹⁹⁸ but they also have to worry about the occasional uploading of unauthorized commercial content.¹⁹⁹ Commercial pornographers have recently begun to exploit this worry with aggressive lawsuits that accuse the sites of building their business on the unlicensed exploitation of copyrighted content.²⁰⁰ These suits are part of a larger flurry of litigation in which copyright owners are seeking to

195. *Id.*

196. See *supra* Part I.A. The second negative effect of the entitlement is that it increases costs of downstream innovation, see *supra* Part I.B, but we focus here on the first effect under the assumption that pornography sees little in the way of innovation.

197. See *infra* notes 233–249 and accompanying text.

198. Freeman, *supra* note 192 (“New aggregators like YouPorn and PornoTube make it easier for a new audience to find free Internet porn, previously often only accessible to ‘techies’ who knew how to use often illegal file sharing methods like Bit Torrent.”).

199. *Id.* (noting that users post both amateur and commercial pornography on aggregator websites).

200. See, e.g., Matthew Belloni, *Porn Filmmakers Join Fight Against Internet Piracy*, REUTERS, Jan. 13, 2008, available at <http://www.reuters.com/article/filmNews/idUSN1363855720080113>.

recalibrate the liability of internet middlemen.²⁰¹ Already we have seen one result of this pressure: a set of joint guidelines that chip away at the immunity that the middlemen have heretofore enjoyed.²⁰² And if history is any indication, the aggregators will end up adopting overly conservative approaches to all content—for example, by removing material in response to a claim of infringement without fully exploring the merits of the copyright claim.²⁰³ Whether this is a good outcome for internet content in general is an open question, but it would most assuredly be welcomed by those who oppose the proliferation of pornography.

In short, there is good reason to believe that copyright protection is a net loss for the overall availability of pornography. The upside of protection—the incentive it provides to content creators—plays an increasingly small role in an age of widely available amateur material. Yet the downside remains; copyright’s automatic propretization of pornography gums up its otherwise frictionless proliferation. Before considering a return to the days of Lord Eldon, then, we should recognize that copyright can actually retard the dissemination of disfavored content.

C. The Trouble With Trademark

Readers may have noticed that we have not yet explored a major field of intellectual property: trademark law. This omission is intentional. Trademark protection has traditionally been about regulating deceptive means of competition rather than providing incentives for innovation.²⁰⁴ As with patent and copyright, trademark’s exclusive rights create artificial scarcity (i.e., competitors cannot use the same mark)—but in trademark law that scarcity is not some necessary evil that we have to put up with in order to provide a needed

201. In addition to the PornoTube case, major media companies have recently filed cases against YouTube, see *Viacom Int’l v. YouTube, Inc.*, No. 07-CV-2103 (S.D.N.Y. filed Mar. 13, 2007), and two music search engines, see *Warner Bros. Records Inc. v. SeeqPod, Inc.*, No. CV08-00335 (C.D. Cal. filed Jan. 18, 2008); *Capitol Records, Inc. v. MP3tunes LLC*, No. 07-Civ-9931 (S.D.N.Y. filed Nov. 9, 2007). Another aggregator website, Stage6.com, shut down in 2008 in the midst of similar litigation. Mike Freeman, *DivX to Dump Video-Sharing Stage6 Service*, SAN DIEGO UNION-TRIBUNE, Feb. 26, 2008, at C1.

202. See David Ho, *Video on Internet Gets Boost*, ATLANTA J.-CONST., Oct. 19, 2007, at G5 (describing an agreement under which aggregator sites will filter user-posted content). Google’s YouTube service was conspicuously absent from the deal, but it had already begun to filter for unauthorized content voluntarily. *Id.*

203. See Jennifer M. Urban & Laura Quilter, *Efficient Process or “Chilling Effects”? Takedown Notices Under Section 512 of the Digital Millennium Copyright Act*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 621, 666 (2006) (finding that 30 percent of the nine hundred takedown notices under the Digital Millennium Copyright Act analyzed in the authors’ study were flawed in some significant way).

204. See generally Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839 (2007).

incentive. Rather, scarcity is the whole idea, because exclusive use of a trademark shields the marketplace from deceptive practices. One can see, then, that traditional trademark law does not fit neatly into our model. If artificial scarcity is not a downside, then it cannot be converted into an upside.

That said, two trademark issues merit mention. First, we note that modern trademark law is unique among the major regimes of intellectual property law in that it takes account of morality when determining the scope of its protection. While patent has abandoned the moral utility doctrine²⁰⁵ and copyright no longer examines whether a work is licentious,²⁰⁶ both federal and state trademark statutes have long denied the benefits of registration to any mark that is “immoral” or “scandalous.”²⁰⁷ Therefore, for anyone who doubts the political practicality of using intellectual property as a moral regulator, we cite trademark law.

Second, our approach might justify the grant of seemingly excessive trademark rights in certain kinds of marks. Over the past several decades, trademark law has expanded beyond its traditional role as the regulator of deceptive trade practices; it now gives a rightsholder the ability both to merchandise its mark as a freestanding good (rather than as an indicator of source or quality)²⁰⁸ and to control usage in markets unrelated to its business (if the mark is famous).²⁰⁹ These expanded powers are particularly useful to owners of luxury marks or other brands that consumers use to express status or group identity—the Harley Davidson tattoo, the Chicago Bulls t-shirt, the Rolex watch. Such marks play a part in the kind of positional consumption and exploitation of status that we encountered in our fashion discussion. And just as a high-IP regime would reduce the rate of fashion trends, the exclusivity that strong trademark entitlements provide may limit the number of positional marks, which means that consumers could pursue status and engage in positional self-expression more cheaply.²¹⁰ This comes at a price, of course—for one thing, it

205. See *supra* note 128 and accompanying text.

206. See *supra* notes 176–184 and accompanying text.

207. 15 U.S.C. § 1052(a) (2006); see also Stephen R. Baird, *Moral Intervention in the Trademark Arena: Banning the Registration of Scandalous and Immoral Trademarks*, 83 TRADEMARK REP. 661, 666 & n.15 (1993) (discussing earlier federal statutes); *id.* at 792–93 (discussing state statutes). Some commentators argue that such marks should be denied protection altogether. See *id.* at 790–95; 3 LOUIS ALTMAN & MALLA POLLACK, CALLMANN ON UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 17.21, at 134–36 (4th ed. 2008).

208. See Stacey L. Dogan & Mark A. Lemley, *The Merchandising Right: Fragile Theory or Fait Accompli?*, 54 EMORY L.J. 461, 471–78 (2005).

209. 15 U.S.C. § 1125(c) (2006).

210. Wendy Gordon made a similar argument in commenting on the Raustiala and Sprigman fashion article. See Posting of Wendy Gordon to University of Chicago Law School Faculty Blog, http://uchicagolaw.typepad.com/faculty/2006/11/status_marks.html (Nov. 14, 2006, 9:36 EST).

allows mark owners to extract considerable rents from consumers—and we have our doubts that the benefits are worth the cost. But at the very least, it is another example of a potential welfare gain through seemingly overexpansive intellectual property rights.

III. COMPLICATIONS AND IMPLICATIONS

The preceding discussion demonstrates that intellectual property protection impedes production and innovation in a variety of specific industries—and that this is a good thing if we think social welfare requires the discouragement of those industries. Yet two issues remain.

The first issue involves the practical feasibility of including the target industry within the intellectual property skein. Won't the industry realize that intellectual property rights are bad for its development and thus oppose any enabling legislation? And if it loses that battle, why wouldn't it simply decline to exercise the entitlement or use licensing to replicate the low-IP regime? Each industry's particular political economy informs the answers to these questions, but the analysis draws on certain shared features. We discuss them in Part III.A.

The second issue involves direct regulation. Using intellectual property to suppress an industry seems like a bit of a Rube Goldberg device. Why not just ban the activity directly, or tax it to death? Again, the answer to this question varies somewhat from industry to industry and depends on the specific intellectual property at issue. Yet there are some commonalities, such as the superior effectiveness of the market-oriented, private enforcement of intellectual property. And the political barriers to direct regulation can be such that intellectual property protection is as good a regulator, if not better. We address this direct regulation issue in Part III.B.

A. Is This Feasible?

Intellectual property protection may have the theoretical potential to suppress an industry, but to translate that potential into practice we must address two questions of feasibility. First, if an intellectual property entitlement hurts an industry, why would it ever be enacted? Why wouldn't the industry rise up in opposition to the legislation and carry the day? Second, if the entitlement were somehow enacted, wouldn't the industry's members simply ignore it (knowing that its use would be detrimental to their enterprise), or use licensing to replicate the more optimal low-IP regime? We address these questions in turn.

1. Enactment

As a preliminary matter, we should point out that three of our four exemplar industries are already within the scope of the relevant intellectual property regime. Of the forms of innovation we examine, only fashion currently lacks strong intellectual property protection.²¹¹ The controversy over tax planning and biotechnology is not about whether they should be brought into patent's tent, but whether they should be kicked out.²¹² The same is true of pornography and copyright. By default, copyright already protects pornographic materials, and it would take a special (and probably unconstitutional) effort to exclude them.²¹³ And in all three of these industries, innovators avail themselves of protection and enforce their rights.²¹⁴

The presence of such controversial industries within intellectual property's coverage can be seen as another of the field's well-known uniformity costs.²¹⁵ Although intellectual property law includes a handful of industry-specific regimes (covering, for example, boat hulls, semiconductor design, and news reports²¹⁶), it generally takes a one-size-fits-all approach to regulating innovation; the line between patent and copyright is one of the few subject-matter distinctions that the law draws.²¹⁷ This is not to say that there are no industry-specific doctrines within the broader regimes,²¹⁸ but intellectual property law as presently designed is not particularly good at the wholesale exclusion of distinct forms of innovation.

This state of affairs has two important implications. The first is legislative inertia. Once an industry recognizes that intellectual property protection is counterproductive, it must seek new legislation to get itself excluded—and changing the status quo is necessarily more difficult than simply accepting it. If using intellectual property law to suppress pornography, tax planning, and disfavored biotechnology patents is more a matter of doing nothing than doing something, then our approach obviously becomes more feasible. Here, again,

211. See *supra* notes 143–146 and accompanying text.

212. See *supra* notes 75–76 and 127–128 and accompanying text.

213. See *supra* notes 175–184 and accompanying text.

214. See Hagglund, *supra* note 47, at 60–64; *supra* notes 63–67 and 200 and accompanying text.

215. See, e.g., Carroll, *supra* note 6.

216. See 17 U.S.C. §§ 1301–1332 (2006) (boat hulls); *id.* §§ 901–914 (semiconductors); *Int'l News Serv. v. Associated Press*, 248 U.S. 215, 238 (1918) (articulating the “hot news” doctrine).

217. And even this line blurs with computer software, which is protectable under both patent law and copyright law.

218. There are. See, e.g., Burk & Lemley, *supra* note 24; Joseph P. Liu, *Regulatory Copyright*, 83 N.C. L. REV. 87 (2004).

the conventional view is turned on its head. The uniformity costs are actually uniformity benefits.

Second, and more important, the fact that intellectual property rights are already available to these three industries implies some dynamic within each industry that keeps it from securing that level of protection that would serve it best. In other words, feasibility may be found in the particular political economy of intellectual property policymaking.

To better understand the political economy dynamic, let us explore fashion, the one exemplar industry not currently within intellectual property's scope. Here the status quo seems optimal from the industry's perspective: No protection means faster fashion cycles, more innovation, more production, and more profits. And although overall social welfare might call for suppressing fashion by bringing it into the intellectual property fold, one would expect producers of fashion to oppose any such efforts—and to do so effectively, given the public choice advantages that a discrete industry usually wields against the more diffuse interest of the general public.²¹⁹

Yet the reality is that some fashion firms have been lobbying for intellectual property protection.²²⁰ Why? One possibility, of course, is that they have simply miscalculated their interests.²²¹ What's more likely, however, is that the industry suffers from some internal "private choice" problems of its own. A low-IP regime may be best for the industry as a whole, but not for certain individual players within the industry. In other words, the players may be unable to act collectively to further their common interests—the classic prisoner's dilemma.²²²

219. See MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* 53–57 (1971).

220. Hemphill & Suk, *supra* note 143, at 1183 & n.142; see also *Design Law—Are Special Provisions Needed to Protect Unique Industries?: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 110th Cong. 21 (2008) (testimony of Narcisco Rodriguez, Member of the Board of Directors, Council of Fashion Designers of America, in support of protection).

221. For more on the part that miscalculation, ignorance, and inattention might play, see *infra* notes 248–249 and accompanying text.

222. We cannot help but point out that the familiar prisoner's dilemma narrative exemplifies our point that individual welfare and social welfare often diverge. The story involves two prisoners whose inability to act collectively during plea bargaining leads to a suboptimal outcome from their perspective. See, e.g., MORTON D. DAVIS, *GAME THEORY: A NONTECHNICAL INTRODUCTION* 108–09 (rev. ed. 1983). We need not go into the details here; we merely note that the optimal outcome for the prisoners, escaping prosecution for the crime they are presumed to have committed, is hardly the optimal outcome for society at large, which would prefer to see criminals punished. For social welfare purposes, there is no dilemma at all; maximizing the prisoners' inefficiency, like maximizing the inefficiency of tax planning or fashion cycles, would actually be a better outcome.

For example, leading designers support the enactment of intellectual property protection.²²³ Exclusive rights may slow down the overall fashion cycle, but the designers who initiate each cycle could nevertheless leverage the entitlement to obtain higher rents. In contrast, the downside of protection would fall largely on the retailers who tend to be the copyists, who would have to pay for licenses under a high-IP regime. The net effect of this wealth transfer from copyist to originator might be negative (i.e., the industry as a whole would be less profitable), but that does not preclude lobbying by the subset of the industry that stands to gain. A more homogenous industry dominated by a few firms might be able to overcome these collective action problems, but the business of fashion is notorious for its multifarious nature.²²⁴

The fashion example demonstrates that the feasibility of using intellectual property as an instrument of suppression depends to a great extent on the internal dynamics and collective action capability of the industry in question. Again, the fact that three of our exemplar industries already operate under a high-IP regime shows that these internal industry dynamics are more than hypothetical. Take tax planning: Those who support continued protection tend to be small entrepreneurs who patent early and aggressively, while those in opposition are the larger economic consulting firms who were late to the game and who now worry about the holdup effects of a patent on their tax services.²²⁵ In such a confrontation, one might think the big consulting firms would have a political advantage, but the romantic ideal of the independent inventor working out of a garage still carries weight in Congress,²²⁶ and there remains strong lobbying support for individual inventors.²²⁷ Thus, the interests of the

223. See sources cited *supra* note 220; see also Raustiala & Sprigman, *supra* note 158, at 1223 (explaining how elite designers might do better under a strong entitlement regime); Barnett et al., *Fashion Lottery*, *supra* note 143, at 30 & n.39 (same).

224. Raustiala & Sprigman, *supra* note 5, at 1695.

225. See Brief for Double Rock Corp. et al. as Amici Curiae in Support of Petitioners, *Bilski v. Doll*, No. 08-964 (Aug. 6, 2009) (argued) (including small- and mid-sized financial institutions arguing for a broad patentable subject-matter requirement); Brief for Bank of America Corp. et al. as Amici Curiae in Support of Respondent at 2, *Bilski v. Kappos*, No. 08-964 (Oct. 2, 2009) (argued) (arguing, among other things, that “tax mitigation techniques” should not be patentable).

226. See John F. Duffy et al., *Early Patent Publication: A Boon or Bane? A Discussion on the Legal and Economic Effects of Publishing Patent Applications After Eighteen Months of Filing*, 16 *CARDOZO ARTS & ENT. L.J.* 601, 604 (1998) (identifying a political division between large corporations and small inventors); Christopher Cotropia, *The Individual Inventor Motif in the Age of the Patent Troll*, 12 *YALE J.L. & TECH.* 52 (2009).

227. See, e.g., John R. Allison et al., *Valuable Patents*, 92 *GEO. L.J.* 435, 468 (2004) (noting that the small inventor lobby has resisted recent changes to patent law designed to harmonize U.S. patent rules with those in the rest of the world).

industry as a whole fall victim to the self-interest of the individual players within the industry.²²⁸

In short, when evaluating the feasibility of enacting intellectual property protection as a means of suppression, one must examine the peculiarities of the targeted industry. Is there a subset of the industry that will profit from the entitlement, even though the industry as a whole will suffer? Do the costs of collective action preclude a lobbying strategy that benefits the entire industry—for example, having the disadvantaged parties simply pay the advantaged parties to oppose the enactment? The responses to these questions will vary depending on the kind of enterprise at issue, but history teaches us not to assume that the answers will consistently show a confluence of the overall interests of the industry, the interests of particularly powerful or well-organized players within the industry, and the interests of the public.²²⁹

2. Acquisition and Enforcement

Once an entitlement is made available, we must consider why the industry would take advantage of it. There are two dimensions to this question: whether innovators would bother to acquire the right in the first place and, if so, whether they would then enforce the right through litigation or licensing.

The acquisition issue is easy to address in the copyright context because copyright protection attaches automatically, by operation of law.²³⁰ For patent, the issue is more complicated, as obtaining the entitlement involves a purposeful process and the expenditure of time and resources.²³¹ Nevertheless, inventors in a variety of industries routinely acquire patents not to directly exploit them through licensing or manufacture, but to assure themselves sufficient room to continue to innovate, to create a hedge against litigation, and to improve their bargaining position vis-à-vis other innovators in the industry.²³² The prisoner's dilemma is thus present here as well. If all the players in the

228. This means that those who place a high value on distributional equity might have a problem with our approach since it could enrich a few players (tax-plan originators, biotech pioneers, leading fashion designers, commercial pornographers) at the expense of others in the same industry.

229. See, e.g., LAWRENCE LESSIG, *FREE CULTURE* 218 (2004) (noting that more than two-thirds of the original congressional sponsors of the Copyright Term Extension Act received contributions from Disney's political action committee).

230. See James Gibson, *Once and Future Copyright*, 81 NOTRE DAME L. REV. 167, 168 (2005).

231. See Christopher A. Cotropia, *Modernizing Patent Law's Inequitable Conduct Doctrine*, 24 BERKELEY TECH. L.J. 723, 780 (2009) (detailing the process and the costs of obtaining a patent).

232. See Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 31–41 (2005); see also Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979–1995*, 32 RAND J. ECON. 101 (2001) (exploring the same issues in the context of the semiconductor industry).

industry could get together and agree not to patent, their overall welfare would increase—but the cost of such collective action is prohibitive.

This same dynamic explains why a rightsholder would exercise the entitlement once obtained. The rightsholder can profit from its use even if the industry as a whole does not, and the coordination costs required to get everyone to agree not to exercise are too high. Even if the industry manages to get along without litigation for a while, the occasional defection will produce an *in terrorem* effect that will cause cooperation to break down—a particularly likely eventuality, given that intellectual property law provides for supracompensatory remedies that will tempt rightsholders into defecting and deter copyists from copying in the first place.²³³

Once again, the fashion industry provides a fitting example. In 1998, the European Union introduced a comprehensive system of fashion design registration and protection.²³⁴ At first these measures seemed to have little effect; few designs were registered and few lawsuits were filed.²³⁵ Recent years, however, have seen an uptick in litigation,²³⁶ and the fragile equilibrium will not survive long if the trend continues.²³⁷ Meanwhile, the United States has seen a spate of litigation against retailers who engage in design copying, despite the lack of significant intellectual property protection. For example, top designers have sued “fast-fashion” retailer Forever 21 more than thirty times in the past two years.²³⁸

233. Such remedies are available in both patent, 35 U.S.C. § 283 (2006) (injunctions); *id.* § 284 (treble damages); *id.* § 285 (attorneys' fees), and copyright, 17 U.S.C. § 502 (2006) (injunctions); *id.* § 504 (disgorgement of profits and statutory damages of up to \$150,000 per work infringed); *id.* § 505 (attorneys' fees). For a detailed discussion of the effect of such remedies on users of intellectual property, see Gibson, *supra* note 44.

234. Council Directive 98/71, 1998 O.J. (L 289) 28 (EC).

235. See Raustiala & Sprigman, *supra* note 5, at 1735–43.

236. Karen Fong & Tom Grek, *IP Special Report: Crimes of Fashion*, LAWYER.COM, Jan. 19, 2009, <http://www.thelawyer.com/cgi-bin/item.cgi?id=136319&d=415&h=417&f=416> (reporting that “[c]opycat fashion actions have recently been on the increase” and citing a handful of prominent cases).

237. Moreover, those that doubt that intellectual property rights will ever turn Europe into a hotbed of fashion lawsuits see a different picture when they consider the effect of such rights on our more litigious American society. See *A Bill to Provide Protection for Fashion Design: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. 88 (2006) (testimony of Christopher Sprigman) (noting that the United States is unlike Europe in having “a class of litigation entrepreneurs who turn to the federal courts readily to seek leverage in competitive industries” and thus predicting “a chilling effect on the industry” if rights are granted in the United States). Note also that supracompensatory remedies are generally available in the United States, see *supra* note 233, but not in Europe, see Council Directive 2004/48, art. 13, 2004 O.J. (L 195) 16, 23 (EC), which is another reason to expect more litigation and greater *in terrorem* effects here.

238. Liz McKenzie, *Mistrial Declared in Trade Dress Suit v. Forever 21*, LAW 360, May 29, 2009 (describing suits filed by Diane von Furstenberg, Anna Sui, Harajuku Lovers, and others); see also Hemphill & Suk, *supra* note 143, at 1173 (finding fifty-three suits against Forever 21 between 2003 and 2008); Barnett et al., *Fashion Lottery*, *supra* note 143, at 29 (recounting appreciable *in terrorem* effect even under the current low-IP regime).

So designers might not sue each other, but they do not appear reluctant to sue the pure copyists who do no designing of their own—and it is this kind of copying that fuels the quick fashion cycle. We see similar defection playing out in the tax-planning area, where the *in terrorem* dynamic is already backed by a strong entitlement.²³⁹

We call this the “honeypot effect.” Even if innovators do not require the promise of an intellectual property entitlement to incentivize their craft, they might not be able to resist exercising the entitlement once it is theirs.²⁴⁰ For instance, when amateur pornographers realize that others are making money from their exploits—such as the aggregator sites that compile uploaded videos—they might start demanding a piece of the pie.²⁴¹ Such an exercise of rights would naturally lead to an artificial scarcity of the licensed content.

Of course, enforcement of intellectual property rights is not only about litigation. It is also about licensing. If an industry that thrives under a low-IP regime suddenly finds itself in a high-IP world, it might try to replicate the former equilibrium by liberally granting permissions to other players in the industry. For example, if fashion does best without strong entitlements, then, in a high-IP world, wouldn’t designers simply grant licenses to copyists? If it is really in Chanel’s interest for its latest fashion to die out quickly (so that the next trend can begin sooner), then Chanel will hasten the design’s demise by licensing it to Saks Fifth Avenue, then to Macy’s, then to Wal Mart. The fashion cycle will move just as quickly, with the only difference being a wealth transfer from copyists to designers.

239. The SOGRATS tax patents dispute is the result of an individual player defecting from an industry that had not traditionally sought patent protection. See Beale, *supra* note 62, at 108–09. Recent research shows that most business method litigation is initiated by individuals rather than large market players. Josh Lerner, *The Litigation of Financial Innovations* (Nat’l Bureau of Econ. Research, Working Paper No. 14321, 2008) (“The finance patents being litigated are disproportionately those issued to individuals.”).

240. One might view this as an offshoot of the endowment effect—the documented tendency of people to place a higher value on that which they own than that which they do not. See Richard Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON. BEHAV. & ORG. 39, 44 (1980). Preliminary results from an empirical study suggest that the endowment effect is even stronger when the ownership involves intellectual property. See Christopher J. Buccafusco & Christopher Jon Sprigman, *Valuing Intellectual Property: An Experiment 1* (John M. Olin Law & Econ. Research Paper Series, No. 2010-04, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1568962.

241. Bartow, *supra* note 4, at 802 (“Some of the user-generating up-loaders, however, may assert proprietary intellectual property claims over their pornographic content.”). Right now the norm appears to be no compensation for the uploading amateur, although he or she does retain ownership of the copyright in the uploaded material; the websites seem to require only a nonexclusive license. See, e.g., Pornhub Terms & Conditions § 6(3), <http://www.pornhub.com/front/terms> (last visited Apr. 4, 2010); YouPorn Terms of Service § 6, <http://www.youporn.com/terms> (last visited Apr. 4, 2010).

The answer is that even if licensing could reproduce the low-IP equilibrium, some industry profits would dissipate in the form of the transaction costs that inevitably accompany licensing—costs that are necessary only under a high-IP regime. In fashion, for example, the anchoring that determines trends would be very costly to duplicate through licensing, if it would be possible at all; the process of picking fashion winners may be far too random and decentralized to mimic through deliberative negotiation. And trends are often short-lived, sometimes lasting for only a single season,²⁴² which means that licensing would have to take place extremely quickly—a challenging and expensive prospect in a large, heterogeneous industry.

Likewise, licensing of patented tax plans would encounter significant transaction costs in the form of strategic bargaining. If a tax plan is developed by or exclusively for a particular company, that company will want to maintain exclusive use of the patented plan to maintain a competitive advantage over its market rivals. The plan's reduction in tax liability gives the originating company a competitive advantage over others.²⁴³ To maintain this advantage, the company holding the tax patent will not license it to others in the industry for anything less than a rate that would negate any tax liability savings the plan would provide. As a result, the tax plan will not be licensed.²⁴⁴

To give the theory some real-world context, consider the cross-border dividend-stripping transaction that Compaq developed in the 1990s and that was the subject of major litigation.²⁴⁵ This tax-planning strategy allowed Compaq to eliminate tax liability for its foreign passive income.²⁴⁶ If Compaq had patented this method, it surely would not have licensed it to other multinational companies, because its exclusive use gave Compaq a competitive advantage by lowering its tax liability. As Brant Hellwig puts it, “the right to exclude embodied in the patent would provide Compaq with the means of preventing the externality it imposes through its tax planning from being diluted by the participation of others.”²⁴⁷

242. Raustiala & Sprigman, *supra* note 5, at 1692.

243. See Hellwig, *supra* note 4, at 1018–19.

244. *Id.* at 1020 (“Patents on tax strategies, however, would introduce a winner-take-all aspect to the tax planning arena . . .”).

245. *Compaq Computer Corp. v. Comm’r*, 277 F.3d 778 (5th Cir. 2001). Brant Hellwig uses this example. See Hellwig, *supra* note 4, at 1018–20.

246. See Hellwig, *supra* note 4, at 1018–19 (describing the tax planning strategy developed by Compaq as a “cross-border dividend-stripping transaction”).

247. *Id.* Hellwig even notes that “[g]iven the claim that tax planning is socially undesirable, one could view Compaq’s ability to preclude others from using the technique in a positive light.” *Id.* at 1019 n.38. However, he dismisses this conclusion because he believes it wrongly assumes that the alternative is no tax planning at all rather than second-best alternatives that would lead to “greater distortion of taxpayer behavior.” *Id.* One of the problems with this dismissal is that it fails to make the proper

Finally, whether we are dealing with licensing or litigation, the feasibility of using intellectual property law to suppress innovation and production may depend on ignorance, inattention, and miscalculation. Those concerned with the enactment and exercise of entitlements do not always act rationally, especially when rationality depends on a subtle argument like the one we are making here. Certainly legislators should not be expected to be steeped in the intricacies of intellectual property policy; they tend to think that more protection necessarily equals more innovation and production.²⁴⁸ And the one-size-fits-all approach of intellectual property legislation compounds the problem by making the law insensitive to individual industry dynamics and by making legislators less likely to focus on the counterproductive effects of including some particular form of innovation within the broad regime. Add to that the odd twist of using intellectual property law to retard rather than promote, and a lack of understanding on the part of the legislature would be no surprise.²⁴⁹

Even those who work within or study an industry do not always recognize the innovation policy implications of their positions. In the tax-planning debate, many of those who oppose patent protection make arguments that push in the other direction—that such protection would actually harm society. They fail to see the link between the individual arguments and their policy recommendations. Those outside the intellectual property field are even more prone to believing that adding intellectual property entitlements to the mix always helps an industry. This superficial belief naturally applies to the inverse situation as well. If an industry harms society, the prevailing view is that it should not receive such entitlements. Its adherents fail to recognize when their own analysis suggests the contrary.

comparison—innovation with patent protection versus innovation without patent protection, given that tax planning is a field with a high level of innovation even under a low-IP regime. Thus, the proper analysis is a world where Compaq and everyone else operate with the highly effective tax plan, compared to a world where only Compaq can use this plan, and everyone else is forced to use something slightly less effective. If tax planning is bad, you would rather force individuals to have to use second-best planning methods—those that either do not result in as much tax savings or tax revenue loss for society or cost more to implement.

248. See, e.g., 144 CONG. REC. 24336 (1998) (statement of Rep. Mary Bono) (noting that her late husband “wanted the term of copyright protection to last forever” and regretting that constitutional constraints obliged her to settle for “forever less one day”).

249. Indeed, legislators’ inattention could ultimately save our approach from constitutional challenge since a deliberate attempt to use congressional power to suppress an industry could founder on the law and language of the First Amendment, see sources cited *supra* notes 181–182, and the Patent and Copyright Clause, which grants Congress the power to use patent and copyright to promote, not retard, progress in science and the useful arts, see U.S. CONST. art. I, § 8.

B. Why Not Direct Regulation?

Even if one agrees with the foregoing analysis, there remains the question of why we should go through all the effort. Isn't it easier to directly regulate the unfavorable subject matter by banning it outright or taxing it to death? The shortest distance between two points is a straight line, and using intellectual property as the regulatory instrument seems like a roundabout approach.

One possible advantage of using direct regulation is that when the government bans or taxes an activity, it sends a clear message that that activity is wrong. In contrast, if the government rewards the activity with intellectual property entitlements, at the very least, it fails to send such a message—and at worst it signals approval of the activity. Our approach therefore runs the risk of giving the state's imprimatur to activities of which society disapproves, such as human cloning or pornography.²⁵⁰

Our response to this objection is twofold. First, both patent and copyright now admit all comers. Each regime once had a morality requirement, but no longer.²⁵¹ Therefore, neither entitlement sends a particularly strong signal of government approval.²⁵² Second, even if granting rights did send such a signal, we would presumably live with it as long as the actual effect of the entitlement was to reduce the disfavored activity. After all, do we actually want less pornography, or do we merely want to signal that we want less pornography? Refusing to use the most effective means of suppression merely because it sends an inconsistent message is cutting off the nose to spite the face.

The question, then, is whether our counterintuitive approach really is more effective than direct regulation. Our search for the answer begins with an assessment of the effectiveness of direct regulation, a subject on which there is considerable evidence. At one time or another, direct regulation has played a part in all four of the industries we have examined. Congress and the IRS routinely close loopholes exploited by abusive tax-planning strategies,²⁵³ and criminal law prohibits tax-planning activities that rise to the level of "willful" tax

250. See Bagley, *supra* note 4, at 475–76 (cloning and other "morally controversial" biotechnology).

251. See *supra* notes 128 and 176–184 and accompanying text.

252. Tim Holbrook has suggested that the modern patenting process might not be as morally neutral as one might think; for example, it might grant protection to a method that "cured" a blind person of blindness but not one that "cured" a sighted person of his or her ability to see. Holbrook, *supra* note 128, at 579 n.30, 615. But he admits the possibility of a truly neutral approach and that it might be the best option even for those concerned about the imprimatur problem. *Id.* at 615–16.

253. See, e.g., I.R.S. Notice 2000-44, 2000-36 C.B. 255 (announcing that "losses" recognized in transactions which had been designed to provide taxpayers with an artificially inflated basis in their investment were not deductible for federal income tax purposes).

evasion.²⁵⁴ In biotechnology, while most regulation is indirect,²⁵⁵ the law does prohibit certain uses of human materials and ethically questionable biological research,²⁵⁶ and the FDA also directly regulates some uses of biotechnology (for example, genetically modified food).²⁵⁷ Sumptuary laws and luxury taxes have regulated consumers' freedom to adopt certain fashions.²⁵⁸ And pornography has long been a target of direct government suppression.²⁵⁹

For various reasons, however, these forms of direct regulation have not been particularly effective. Sometimes the explanation is specific to the industry at issue. For example, industries like fashion and pornography deal with expressive content, which means that a significant obstacle to direct regulation is the Constitution's guarantee of free speech.²⁶⁰ The Supreme Court has recognized the First Amendment implications of matters sartorial and pornographic. (In the right circumstances, choosing to wear something and choosing to wear nothing can both constitute speech.²⁶¹) Therefore, in order to single out pornography for a ban or a tax, the legislature would have to demonstrate that its regulation was narrowly tailored to promote a compelling government interest and that no less restrictive alternative was available—a showing it has rarely been able to make.²⁶² A prohibition on specific fashions would likely suffer the same fate.²⁶³

254. 26 U.S.C. § 7201 (2006).

255. See Christopher Robertson, *Recent Developments in the Law and Ethics of Embryonic Research: Can Science Resolve the Ethical Problems It Creates?*, 33 J.L. MED. & ETHICS 384, 384 (2005) (noting that this is a decision based at least in part on moral considerations).

256. See, e.g., Lori B. Andrews, *State Regulation of Human Fetal Tissue Transplantation*, in 2 REPORT OF THE HUMAN FETAL TISSUE TRANSPLANTATION RESEARCH PANEL, at D1 (1988) (noting various state laws that regulate the disposition, transport, and research of dead fetuses, live fetuses, and embryos).

257. See, e.g., *Coordinated Framework for Regulation of Biotechnology*, 51 Fed. Reg. 23,302 (June 26, 1986) (discussing the FDA's and other agencies' roles in regulating genetically modified food).

258. See *infra* text accompanying note 271.

259. See EDWARD DE GRAZIA, *GIRLS LEAN BACK EVERYWHERE: THE LAW OF OBSCENITY AND THE ASSAULT ON GENIUS* (1992).

260. Indirect regulation of pornography and fashion could conceivably present First Amendment issues as well. Here, however, we are concerned only with comparing direct regulation with indirect, and on that score it is clear that the former faces much greater free speech challenges than the latter since Congress has a long and unchallenged history of including certain forms of expression within copyright while excluding others. See Christopher C. Dreman, *Copyright Protection for Architectural Works*, 23 AIPLA Q.J. 325, 327–28 (1995).

261. E.g., *Barnes v. Glen Theatre, Inc.*, 501 U.S. 560 (1991) (upholding a statute that did not permit nude dancing, but finding that under different circumstances nude dancing could be expressive conduct under the First Amendment); *Tinker v. Des Moines Indep. Cmty. Sch. Dist.*, 393 U.S. 503 (1969) (holding that wearing a black arm band to school was protected speech); see also *Ala. and Coushatta Tribes of Tex. v. Trs. of Big Sandy Indep. Sch. Dist.*, 817 F. Supp. 1319 (E.D. Tex. 1993) (invalidating on free speech grounds a regulation that prohibited long hair).

262. See, e.g., *United States v. Playboy Entm't Group, Inc.*, 529 U.S. 803, 811–13 (2000) (applying strict scrutiny and invalidating a regulation targeting sexually explicit material); *Ark. Writers' Project v. Ragland*, 481 U.S. 221, 233 (1987) (invalidating a tax that applied to certain types of magazines but not

In many instances, however, the ineffectiveness of direct regulation and the superiority of using intellectual property as an instrument of suppression arise from factors that cut across industries and legal regimes. One such factor is the definitional difficulties that direct regulation often encounters. Consider tax planning, in which direct regulation has turned into a never-ending game of cat and mouse.²⁶⁴ When tax planners develop new planning methods, they try their best to keep these methods secret, so as to avoid detection. The IRS and Congress can therefore only define the activity to be banned after the fact, and in most cases not until the method's use is widespread enough to come to their attention.²⁶⁵ The same can be said for the regulation of morally questionable biotechnology. Lawmakers cannot predict what new technology is going to be created or used, so regulation typically deals with biotechnology areas only after they have been fully developed.²⁶⁶

In contrast, patent law solves the *ex post* definitional problem because it is specifically tasked with handling new technological developments. The novelty and nonobviousness requirements direct patent protection to the forefront of

to others). A legislature could ban all obscene content without running afoul of the First Amendment, see *Miller v. California*, 413 U.S. 15 (1973), but such a ban would cover only a small subset of pornographic material and would thus leave unaddressed many of the perceived evils of pornography.

263. Government restrictions on choices about one's personal appearance often encounter some form of First Amendment scrutiny, and they tend to survive only when the wearer's particular occupation demands uniformity in uniform. *E.g.*, *Goldman v. Weinberger*, 475 U.S. 503, 510 (1986) (upholding restriction on military officers); *Kelley v. Johnson*, 425 U.S. 238 (1976) (upholding restriction on policemen); *Littlefield v. Forney Indep. Sch. Dist.*, 268 F.3d 275 (5th Cir. 2001) (upholding restriction on students); *United States v. Bd. of Educ.*, 911 F.2d 882, 894 (3d Cir. 1990) (upholding restriction on teachers). A general ban on all new fashions would not seem to fit within these limits. See *City of Ladue v. Gilleo*, 512 U.S. 43, 54-55 (1994) (invalidating a content-neutral ordinance that "almost completely foreclosed a venerable means of communication that is both unique and important" and thereby "eliminat[ed] a common means of speaking"); Richard A. Seid, *A Requiem For O'Brien: On The Nature Of Symbolic Speech*, 23 CUMB. L. REV. 563, 589 n.128 (1993) (arguing that a ban on hanging clothes on a clothesline might be speech restriction "if the government distinguished some clothes from others, e.g. fashion clothes from working clothes").

264. See Burk & McDonnell, *supra* note 49, at 1000 (noting that "[s]ervice enforcement and rulemaking are highly imperfect in their ability to discourage inefficient planning strategies" and suggesting that "[g]iven such limitations, perhaps it makes sense to use . . . patent law . . . to supplement the imperfect tool of tax law"); Hellwig, *supra* note 4, at 1024 ("The overall success of a tax shelter depends in large part on avoiding government detection for as long as possible."). Of course, direct regulation sometimes does succeed. See *id.* at 1024 (noting that key appellate court rulings have the "tax shelter industry . . . on the ropes"). However, when it does, it may be a matter of mere fortuity rather than the result of deliberate planning on the part of the government. *Id.* (indicating that things could be very different in tax shelter enforcement if a few rulings go the other way).

265. See Hellwig, *supra* note 4, at 1024 ("Virtually all shelter transactions become worthless once they come to the government's attention, primarily through administrative action intended to ensure that future users will have to litigate their doubtful claim to the purported tax savings.").

266. See, e.g., PRESIDENT'S COUNCIL ON BIOETHICS, HUMAN CLONING AND HUMAN DIGNITY xxi (2002) (noting that a mammal was successfully cloned in 1997, but that by 2002, Congress had yet to pass legislation restricting cloning).

a given technology, so that exclusivity attaches to what is coming next, not to what has already become widespread.²⁶⁷ Patent law is even structured so that inventors file for patents early in the development cycle when the technology is at its concept stage, well before commercialization.²⁶⁸ This structure means that exclusivity and all of its anticonsumption and anti-innovation effects would attach at a disfavored technology's infancy. In short, instead of defining the disfavored activity reactively as direct regulation would, a patent approach is proactive. The same can be said of copyright and fashion; direct regulation would have a hard time identifying and prohibiting trends ahead of time, but copyright law would simply welcome all apparel into its scope and let the industry dynamics supply the suppression.²⁶⁹

Definitional challenges also attend the precise articulation of the activity to be banned or taxed, even after its existence is known. When regulators begin to circumscribe the disfavored activity, they invariably encounter opposition not only from those who engage in the activity, but also from those in related fields who worry that a broad definition will unintentionally sweep them into its scope. We see this in the tax-planning debate, where the patent bar has expressed concern that bans on tax-planning patents may unintentionally cover other business methods and software inventions that have an impact on tax liability.²⁷⁰ Deciding what fashions to prohibit seems equally problematic. Clearly the ban could not apply to all clothing but would have to focus instead on new fashions, haute couture, or some equally amorphous classification.²⁷¹ And defining pornography is a formidable undertaking that has bedeviled experts for years.²⁷²

267. See 35 U.S.C. §§ 102, 103 (2006); *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418–22 (2007).

268. See Christopher Cotropia, *The Folly of Early Filing in Patent Law*, 61 HASTINGS L.J. 65, 75–82 (2009) (describing how the patent system encourages filing early in the development process).

269. We should mention that recent legislative proposals have contemplated less than full copyright protection for fashion design. For example, the most recent bill would grant three years of protection against substantially similar copies. Design Piracy Prohibition Act, H.R. 2196 § 2(d)–(e), 111th Cong. (2009); see also H.R. 5055 § 1(c), 109th Cong. (2d Sess. 2006) (proposing three-year term). Yet even these seemingly low-IP proposals would stifle the industry, as three years of protection is a lifetime in a world in which fashions come and go each season, see Peter Doeringer & Sarah Crean, *Can Fast Fashion Save the US Apparel Industry?*, 4 SOCIO-ECON. REV. 353, 359 (2006) (describing high turnover of trends), and substantial similarity is a far-reaching, daunting, and ambiguous standard, see Gibson, *supra* note 44, at 891. Even the narrower form of protection that Hemphill and Suk envision, see Hemphill & Suk, *supra* note 143, at 1185–90, could chill innovation in the industry. See Raustiala & Sprigman, *supra* note 158, at 1219–21 (critiquing Hemphill and Suk's proposal).

270. We recognize that direct regulation in the tax context would involve revising the tax code, not banning the patenting of the tax plan, so our point here is by way of analogy.

271. In addition, political reality makes such bans unlikely. This was not always so; in the ancient world, the elite maintained their status through sumptuary regulation that forbade the lower classes from imitating elite attire. See SCHOR, *supra* note 169, at 8; Hemphill & Suk, *supra* note 143, at 1161–62.

Intellectual property law, on the other hand, largely avoids these problems. As we have already explained, patent's nonobviousness requirement does the line-drawing automatically, at least for tax planning.²⁷³ And copyright's one-size-fits-all approach to expressive works allows both pornography and fashion to be added to its domain without having to define either. Indeed, pornography is already covered.²⁷⁴

Fashion, on the other hand, is not currently within copyright's scope, and so we would need a legislative change—a statutory definition of what was being added to copyright's domain.²⁷⁵ But again, this definition would not require the difficult line-drawing of a direct regulation because direct regulation must single out those particular fashions that are welfare-reducing, whereas copyright can simply include all apparel within its coverage.

Finally, suppression through privately enforced entitlements may be more efficient than top-down regulation. After all, when we want to promote innovation, we rely on intellectual property law to create a private market in information goods; direct governmental rewards for innovation play a comparatively small role.²⁷⁶ Why then would we assume that the government would be better than private parties at providing incentives *not* to innovate? Individuals in possession of valuable entitlements have a self-interest in their enforcement (for example, recouping costs and extracting rents from others), and exercise of those entitlements is to be encouraged when that private interest aligns with the public interest.

This produced a praiseworthy slowing of the fashion cycle albeit with a less-than-praiseworthy motive. But such laws are unthinkable today. Of course, direct regulation would not have to take the form of an outright ban. Instead, regulators could impose luxury taxes on expensive positional goods—another approach with a long pedigree. See, e.g., RAE, *supra* note 166, at 286–89 (recognizing welfare gains that can come from taxing involved in positional consumption); MELVIN WARREN REDER, *STUDIES IN THE THEORY OF WELFARE ECONOMICS* 65–66 (1947) (same). Here too, political considerations favor our indirect approach. Raising taxes is never popular, even on the rich, and raising them to a level that would appreciably slow the fashion cycle may be well-nigh impossible. Moreover, a luxury tax would apply only to the trends that descend from the wealthy elite and leave unaffected the fashions that bubble up from the street or from a more diffuse zeitgeist.

272. See, e.g., James Lindgren, *Defining Pornography*, 141 U. PA. L. REV. 1153 (1993) (reviewing and testing various definitions).

273. See *supra* notes 71–74 and accompanying text.

274. See 17 U.S.C. § 102(a) (2006) (including literary works, pictorial works, and motion pictures within copyright's scope). Therefore, our approach would merely maintain the status quo and entrench the holdings of *Mitchell Brothers Film Group v. Cinema Adult Theater*, 604 F.2d 852 (5th Cir. 1979), and *Jartech, Inc. v. Clancy*, 666 F.2d 403 (9th Cir. 1982), against their few attackers. See *Devils Films, Inc. v. Nectar Video*, 29 F. Supp. 2d 174 (S.D.N.Y. 1998) (strongly implying that copyright should not protect obscene works but ultimately resolving the case without addressing that issue).

275. See *supra* notes 143–146.

276. See Michael Hart, *The Chimera of Industrial Policy: Yesterday, Today and Tomorrow*, 19 CAN.-U.S. L.J. 19, 36 (1993) (“Governments do not have a good track record of picking winners and losers, but losers have an excellent record of picking governments.”).

Moreover, rightsholders are part of the industry that needs to be regulated, and they therefore have informational advantages in detecting violations of their entitlements. For example, the inventor of the SOGRATS tax patent, a tax planner himself, attended an ABA tax section meeting and witnessed a presentation of a tax-planning method similar to that claimed in the patent.²⁷⁷ In contrast, the government has many regulatory priorities competing for its attention and must confront complex, highly politicized resource allocation decisions. In the end, then, it is at least an open question as to whether direct governmental suppression of a disfavored industry would be as effective and efficient as the indirect regulation we suggest.

CONCLUSION

The downside of intellectual property (limiting production and slowing down innovation) is traditionally considered just that, a downside. In this Article, however, we have demonstrated that when it comes to industries that are harmful to society, the downside of intellectual property can in fact be an upside. If the industry has robust production or is near the top of its innovation curve without intellectual property protection, then granting protection can have a constraining effect—and this effect is a social positive when applied to disfavored industries.

Our analysis also links together several disparate strands of intellectual property theory and locates them within the broader context of industrial policy. Industrial and technological regulation involve a wide variety of actors—Congress, federal agencies, the courts, state governments, and so forth—but all have tended to view intellectual property as a bench player that is called into the game only for the limited purpose of promoting innovation. They are wrong. Intellectual property entitlements are more complicated, more sophisticated, and more versatile than has been assumed. In unexpected and counterintuitive ways, intellectual property informs ongoing debates over moral regulation, over the wisdom of granting new protections to thriving industries, over the supposed costs of one-size-fits-all legal regimes, and more. Going forward, then, policymakers must broaden their focus and learn to take advantage of both the upside and the downside of intellectual property law.

277. See *supra* notes 65–66 and accompanying text.