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Creation Without Restraint: Promoting Liberty and Rivalry in Innovation

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Creation without Restraint

PROMOTING LIBERTY AND RIVALRY IN INNOVATION

Christina Bohannon

Herbert Hovenkamp



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Introduction

FEW THINGS ARE MORE important to social welfare than innovation. Nevertheless, implementing the right set of legal rules to foster innovation has proven to be remarkably difficult, and the differences are not merely in the details. On issues of intellectual property (IP) rights alone, reasonable and knowledgeable people differ on fundamental questions, and over a wide range. For example, they disagree about the optimal scope and duration of patent or copyright protection, with some believing we would be better off with no IP law at all.¹ The differences are hardly confined to academics. People from different markets and industries want different amounts and kinds of protection. What works best in one market is no good for others. Therefore, it is hardly surprising that IP statutes are a *mélange* of protections for various interest groups. The antitrust laws reflect interest group pressure much less obviously, but antitrust is hardly immune from disputes about the role it should play in innovation policy.

By “innovation” we mean any human idea that adds something important to what we already have. Innovations can be devices, processes, or expressions. The value of an innovation is always incremental in that it sits on top of what we had before. By “innovation policy” we mean the full range of policies for encouraging progress through innovation. Innovation policy includes IP law, but it also includes antitrust

¹ On patents, see Michele Boldrin & David K. Levine, *Against Intellectual Monopoly* (2008); on copyright, see Supreme Court Justice Stephen Breyer’s *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 Harv. L.Rev. 281 (1970).

law, with its explicit concerns about maintaining competition, as well as regulatory policy established for particular markets, such as telecommunications, energy, and medicine, and occasionally tort law. While innovation policy certainly includes state trade secret law, our principal concern is with federal law passed under the Intellectual Property Clause of the Constitution—namely, patent and copyright—as well as federal antitrust law.

The Constitution's IP clause, with its requirement that patent and copyright law "promote the progress" of their fields by creating rights for "limited times," establishes a rationale for IP that is based on economic incentives rather than some alternative theory such as natural rights.² Our purpose here is not to debate whether that is the correct rationale for IP protection.³ To be sure, people compose music, write poetry, and even invent new products for noneconomic motives, but these have not played a particularly important role in the process by which the law encourages innovation. This is so for several reasons. First, notwithstanding the mythology of the inventor in the garage, today most inventing goes on in business firms whose principal motive is profit. Even much of the innovation that occurs in universities has profitable licensing as a goal. The same thing is true in copyright. Indeed, and distressingly, the artist, author, and composer have almost become invisible in copyright litigation. The principal interest holders are publishers, movie or music producers or other media companies—and the motives are almost always financial. Finally, although noneconomic incentives readily explain why people innovate some things, it does not explain why they seek out and later enforce legal powers to exclude. To be sure, copyright law has its J.D. Salingers who do not want their unpublished letters to be duplicated by anyone at any price.⁴ But reclusive letter writers do not drive any significant portion of copyright law. By and large copyright law, just like patent law, is built on a system of creating private incentives to innovate.

An innovation policy based on private incentives requires balancing of two offsetting rights. One is the right to compete by innovating new things; the other is the right to appropriate part of the value of innovation's results. The two most important prerequisites for healthy innovation are a large public domain of ideas and protection for the significant incremental innovations that constantly enrich our stock. Protection of the public domain is essential. Those societies that have enjoyed the greatest amount of innovation progress have provided substantial freedom for innovators to build on the

² See U.S. Constitution, Article 1, Section 8, Clause 8, declaring that Congress shall have the power "To promote

work of their predecessors.⁵ Every innovation builds on the works of others, some of whom are acknowledged and others who are not. As Judge Alex Kozinski once wrote:

[O]verprotecting intellectual property is as harmful as underprotecting it. Creativity is impossible without a rich public domain. Nothing today, likely nothing since we tamed fire, is genuinely new: Culture, like science and technology, grows by accretion, each new creator building on the works of those who came before. Overprotection stifles the very creative forces it's supposed to nurture.⁶

Protection for new inventions and expression, the second prerequisite for healthy innovation, is important too. The need for and amount of protection varies considerably from one situation to the next, however. Further, it is critical that this protection be only "for limited times," as the U.S. Constitution mandates. Protected inventions and expression must go into the public domain so they can incentivize further innovations without restraint. If this reversion to the public domain is to be meaningful, it must occur at a time when the protected good still has some economic life remaining.

Problematically, the size of the public domain and the scope of IP protection are inversely related. Every grant of an IP right reduces the size of the public domain, and the broader the IP right the greater the reduction. IP policy must try to find a balance that maximizes the net gains that result from increased exclusivity, minus the loss of social value from a diminished public domain. It must also account for the very considerable administrative and litigation costs of running the IP system as well as its propensity to make serious errors.

Antitrust policy has an important role as well. The primary purpose of antitrust law is to promote competition. For large parts of their history, however, both IP law and antitrust law have worked so as to undermine innovation and competition by protecting too much. Antitrust policy has often reflected exaggerated fears of competitive harm, and responded by developing overly protective rules that shielded inefficient businesses from competition at the expense of consumers. By the same token, the IP laws have often undermined rather than promoted innovation by granting IP holders rights far beyond what is necessary to create appropriate incentives to innovate. In the process the IP laws have often increased the costs of innovation in markets where innovation requires building on the works of others, for which we have gotten very little in return.

The Controllable Determinants of Innovation

Today most economists believe that innovation contributes much more to economic progress than the simple creation and maintenance of competitive markets. At the same

⁵ See, e.g., Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* 244–45 (1998).

⁶ *White v. Samsung Elecs. Am., Inc.*, 989 F.2d 1512, 1513 (9th Cir. 1993) (Kozinski, J., dissenting).

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time, the amount of economic competition in a society strongly relates to the amount of innovation that it produces. Further, innovation is the product of both private and public efforts. There is little question that correctly targeted government policy can create incentives to innovate.

In our capitalist system, however, private decision making is usually the dog, and government incentive the tail. Most innovation incentives come from markets and the profit inducements that they create, supported by the legal incentive structure. Numerous market-specific statutes, regulations, and government agencies are concerned with both competition and innovation in various segments of the economy—including energy, telecommunications and computer technology, pharmaceuticals and medical devices, and transportation, to name a few. Overlaying all of this are two umbrella sets of provisions that reach nearly every area of economic and innovation activity, namely, the IP laws and the antitrust laws.

Both antitrust law and the IP laws begin with the premise that private incentives can further competition and innovation, provided that these incentives are properly refereed. In antitrust this generally means that the government defines property and contract rights very generally, but then allows firms to manage themselves, intervening only when public correction seems warranted in order to limit anticompetitive practices. For IP the story is more complex because creating innovation incentives is an explicit part of the way we define the scope of government-protected rights in the first place.

Not all of the inducements for innovation are readily controlled by government policy, however. Some require a very long time horizon, making specific results difficult to predict. For example, perhaps the most important factor of all is the amount of genius, creativity, and resourcefulness held by citizens. So better parenting and education at all levels certainly has a powerful long-term impact on innovation.

Innovation is also affected by engineered or natural market characteristics that are largely beyond effective government control. These attributes include both the actual and the optimal number of firms in a market and their size, degree to which their products are differentiated from one another, firm cost structure, ease of entry by new firms, survival rate of small firms, value of “first-mover” advantages, commercial life of technology, and extent to which production requires technology to be disclosed to the public. For example, technological constraints require that firms manufacturing aircraft or automobiles be quite large. The same constraints do not operate in the market for, say, restaurants or fiction writing. The technology of some markets, such as the manufacturing of soft drinks, is such that a manufacturing process or formula can be kept confidential indefinitely, largely making patent protection unnecessary. In other markets, such as that for printed books and digital rights, an innovation can be immediately copied even by a fairly unskilled person, meaning that the innovator gets little protection unless an enforceable IP right helps the innovator out. In general, product improvements, which can ordinarily be examined by a purchaser, can be copied more readily than process

improvements. Depending on the process, it is often impossible to determine anything about it by looking at the resulting product, and the process itself is carried out only in the manufacturer's plant, which is not open to the public.

Neither antitrust policy nor IP policy affirmatively dictates the number of firms that should be in a market, degree to which products are differentiated from one another, new firm entry, or physical ease of copying. Consumer demand and the natural characteristics of markets largely determine these things. Government policy will intervene, however, if firms attempt to manipulate market characteristics in a way that threatens competition. For example, merger policy may limit the ability of private actors to reduce the number of firms in a market. The antitrust law of boycotts, exclusive dealing, or predatory pricing may serve to limit "artificial" restraints on new market entry. While antitrust law rarely interferes when firms acting alone redesign their products, it intervenes more frequently when competing firms agree with each other on product design.

In some markets, particularly information technologies, innovations become obsolete so quickly that the patent system is little more than a costly nuisance.⁷ In other markets, such as pharmaceuticals, the commercial life of products can be very long and copying is easy, making patents particularly valuable. Copyright law is much the same. The market life of printed books can be very long, although for the majority it is much less than the period of copyright protection. By contrast, most software code will become commercially obsolete long before its copyright expires. While government policy can do little to alter these market facts, it can respond to them in a variety of ways, including differential legal protection or in some cases greater leeway for firms that wish to use patent pools or other mechanisms to "contract out" of parts of the IP system, a topic we take up in Chapter 12.

For more than a half century antitrust policy has faced withering criticism to the effect that there is too much of it, often directed at imagined rather than real competitive problems, that its principal beneficiaries have been business firms rather than consumers, and that it has often served to make the economy less rather than more competitive. As Chapter 3 develops, this critique started out in academic circles and was at first largely ignored, but eventually found a voice in both the Supreme Court and the political branches of government. IP law is on a surprisingly similar course, beginning with relentless criticisms that we have way too much government intervention in innovation markets, in the form of both excess patents and excessive enforcement, that the principal beneficiaries are rights holders rather than the public, and that the result is often to restrain rather than promote innovation. Once again, the criticisms started out in academic writing but many of them have now found their way into the Supreme Court.

⁷ See Chapters 4 and 5; see also Richard Gilbert, *The Rising Tide of Patent Damages*, Concurrences (February 2010).

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Today is a critical and propitious time in the development of innovation policy. The patent system is in a crisis of overissuance, overprotection, and excessive litigation. There may be some light at the end of the tunnel, although the most important reforms have come from the courts, not from Congress. The future is bleaker for copyright law. By contrast, antitrust policy has largely gone through a thirty-year period of reform that has increased its focus on the protection of competitive markets and consumers rather than business. Once again, most of the important reforms emanated from the courts rather than Congress. In the process antitrust has become more sensitive to the complex relationship between innovation and competition. A new discipline of "IP/Antitrust" has emerged, complete with textbooks and classes in law and business schools, and a rich and growing literature.⁸

In one critical sense, IP reform does not need to be as radical as antitrust reform does. Antitrust reform was accomplished in large part because the Supreme Court added a special harm requirement that was not explicit in antitrust's private action statute. For IP law the judicial reform need not be that aggressive. One side effect of an interest group-driven process and lengthy codes is a fair amount of ambiguity in the statutes. That is, many although certainly not all of the important IP provisions are reasonably capable of alternate interpretations. We propose a rule of statutory construction that favors use of the IP laws to create the proper innovation incentives.

It has become prosaic to say that we are living in an information economy. In fact, as Yochai Benkler points out, ours is a networked information economy in which collaboration and compatibility are often essential to the production of things that people value.⁹ Both our antitrust and IP laws originated in an earlier era much more distinguished by the production of physical goods. Both antitrust and IP law have required and still require significant reinterpretation if they are to perform well in a networked innovation economy. Antitrust has done well in some areas, such as recognizing an increased need for collaboration in IP-intensive markets. It has done more poorly in others, particularly in failing to appreciate the harms caused by conduct that restrains rather than furthers innovation. For its part, an appropriation model of IP law generally served us well in the nineteenth century and at least half of the twentieth. Today it is showing its age, a fact that shows up in a number of ways, including the proliferation of patents, the expansion of patent scope, the dramatic growth in patent litigation, and the equally dramatic growth of elaborate and costly countermeasures. As a result, today the cost of the patent system very likely exceeds its value in many industries.¹⁰

⁸ *E.g.*, Herbert Hovenkamp, Mark D. Janis, Mark A. Lemley & Christopher R. Leslie, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* (2d ed., 2010 & Ann. Supp.).

⁹ Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (2006).

¹⁰ See James Bessen & Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk* (2008); Dan L. Burk & Mark A. Lemley, *The Patent Crisis and How Courts Can Solve it* (2009).

Much of the progress in developing networked environments has resulted from economic activities where the gains do not obviously fit traditional models of profit seeking. This is true of technologies such as free, open source software.¹¹ In fact, the development of nonmarket alternatives for moving resources through society is not new. Over history a surprisingly small amount of resource movement has occurred through markets.¹² Some historian writing an economic history of civilization a millennium from now might see economies dominated by market exchange as but a brief interlude in our economic development.

Nevertheless, there is less nonmarket behavior than meets the eye. Many of the free services offered in networked markets result from the fact that the seller does business in complementary products sold in “two-sided” markets. They may subsidize demand on one side of a market in order to increase demand on the other side. For example, firms may use free open source software as a device for selling more hardware. Goods ranging from cellular phones to mainframe computers are sold under such a model.

More than at any time in the past, innovation now depends on information and “softer” forms of technology, such as digital media. It is also more dependent than ever before on “interoperability,” or technical compatibility and shared access. An important legal development in the latter part of the twentieth century was acknowledgment that networks do not require monopoly, or top-to-bottom control by a single entity. They can be made to work quite well under competition, and provide significantly greater benefits than under monopoly, provided that interoperability and the freedom to operate either on or off the network can be maintained.

In the mid-twentieth century patents were commonly regarded as a species of monopoly. Antitrust cases in particular often spoke of the “patent monopoly.” Today we generally view patents less as monopoly and more as a type of property. In some ways this has been a good development, because patents rarely confer substantial market power. They behave more like simple property rights, with “boundary-based” rather than “market-based” power to exclude. For example, a farmer has the power to exclude trespassers from his corn patch, but this does not give him any power at all to charge more than the market price for either corn or farmland. The same thing is true for most patents.

Nevertheless, this makeover in our conception of patents has also contributed to some of patent law’s less desirable expansions. Significantly, the “proptertization” of patent law has not been attended by other requirements that traditionally apply to property rights. One principle of property law is that claimants have the obligation to articulate clear boundaries of ownership, with the penalty for ambiguity falling on the claimant and often being loss of title. Another is that property owners must communicate timely and

¹¹ See Chapter 12.

¹² See Douglas C. North, *Understanding the Process of Economic Change* (2005); Herbert Hovenkamp, *Coase, Institutionalism, and the Origins of Law and Economics*, 86 Ind. L.J. 499 (2011).

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effective notice of their claims because the cost of giving notice is typically much lower than the cost of searching. As James Bessen and Mike Meurer so thoughtfully pointed out in *Patent Failure*, patent law remains an area where we call something property without seriously requiring it to behave like property.¹³ The amount of overprotection and wasted resources that results is enormous. These are largely problems that the patent system must confront for itself, and antitrust has relatively little place. The same thing is true of the copyright system.

Overview

This book addresses these and related issues through a large number of policies relating to patent and copyright law, as well as competition policy and regulation. Chapter 1 explores the nature and goals of competition policy, including some important differences between price competition and innovation competition. Chapter 2 then introduces a phenomenon that is ubiquitous in innovation-intensive markets—namely, tying, or the networking of complementary products. Most of the major antitrust disputes about technology and a surprisingly large number of IP disputes relate to the way that firms link products or markets together.

Chapter 3 then explains and critiques the unjustified differences between proof of harm in competition and innovation policy. In antitrust law harm is never presumed and must be proven without undue speculation, and legal remedies are often denied to those who were clearly harmed. By contrast, IP law often presumes harm, sometimes even going to the extreme of awarding damages to IP owners who were actually benefitted rather than harmed by a defendant's actions. The rhetoric of "property" that we use in IP discourse explains part, but hardly all, of this difference.

Chapters 4 and 5 offer a brief examination of the patent system and its problems, particularly regulatory capture, overissuance of trivial or obvious patents, poorly defined notion of patentable subject matter, and boundary and notice problems that place innovators at needless risk. We also explain why antitrust is not a good vehicle for addressing most of these problems, and then consider several options for increasing the public as opposed to the private, value of patents.

Chapter 6 introduces the problem of special-interest influence and overbreadth in copyright law. Clearly Congress is stuck. Over the past few decades it has tended to listen only to rights holders and not users, and innovation suffers. One important result of legislative capture in copyright is the virtual absence of any serious harm requirement for many instances of copyright infringement, particularly where derivative works and fair use are concerned. Chapter 7 examines the relationship between copyright law, the harm

¹³ Bessen & Meurer, *supra* note 10, 46–71.

caused by others' uses of copyright material, and free expression. The United States has a very strong tradition of First Amendment protection for speech, including speech that is threatening to others, immoral by the standards of many, or socially disruptive in other ways.¹⁴ The one glaring exception is in copyright law, which often permits infringement actions against speech that is both expressive on the part of the speaker and harmless, or virtually so, to the copyright holder or anyone else. We propose a harm requirement for copyright infringement that protects both creative innovation and free speech. Chapter 8 explores other solutions. Because courts are limited in their ability to apply constitutional scrutiny to copyright law, we propose a rule of statutory interpretation. In general, courts should interpret statutory ambiguities in favor of public-regarding provisions such as fair use and the idea/expression dichotomy and against private-regarding provisions such as the derivative works right and Digital Millennium Copyright Act prohibitions. This rule of interpretation will implement legislative intent and avoid constitutional issues while allowing Congress to correct by amendment any mistaken interpretations. History has shown that rights holders are in a far better position than are users to obtain corrective legislation, and in the process Congress will be forced to confront and clarify its policies.

Chapter 9 turns to one place where antitrust policy and IP policy should be aligned—namely, where a practice serves to restrain rather than promote innovation. Unfortunately antitrust's strict proof requirements for harm and effects on price competition often stand in the way of making antitrust a useful device for challenging restraints on innovation, particularly in private lawsuits. Chapter 10 then suggests a partial solution, which lies in the troubled topic of IP "misuse." We explain that, although antitrust violations are an important subset of misuse cases, antitrust law should not define the scope of the misuse doctrine. Misuse doctrine emanates from IP policy, not from antitrust policy, and has its own values to protect. Among these are restraints on competition, restraints on innovation, and unreasonable foreclosure of information or technology that rightfully belongs in the public domain.

Chapter 11 turns to the controversial topic of anticompetitive practices by dominant firms in innovation-intensive markets. Both IP and antitrust law are properly concerned with incentivizing innovation. But innovation can also be manipulated in harmful ways. Dangers to both competition policy and innovation policy can emerge when a dominant firm has significantly greater resources than its rivals. We look in particular at problems involving commandeering and nonuse of patents, refusals to deal in network industries, the appropriate scope of any policy of internet neutrality, and whether innovation itself should ever be condemned as anticompetitive.

Chapter 12 on the "innovation commons" examines both the socially beneficial and the harmful explanations given for joint research, joint production, and standard setting.

¹⁴ See, e.g., *Snyder v Phelps*, 121 S. Ct. 1107 (2011).

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We argue that IP collaborations are often best understood as a way of compensating for IP systems that have divided rights into tiny pieces with uncertain boundaries. These rights cannot be gainfully used unless they are reassembled. Importantly, the arguments for both individual appropriation and commons management are economic. Exclusion by legal process has a cost, and in intellectual property regimes these costs are particularly high because boundaries are so ambiguous. A firm invests in the creation and defense of individual boundaries only to the extent that the gains from exclusion are greater than those from cooperation. The line of equipoise between these two costs identifies the boundary between individual and community management.

Finally, Chapter 13 examines the much misunderstood topic of post-sale and related vertical restrictions on the licensing of IP rights and the sale of IP-protected goods. In IP rights more than any other area, the classical conception of contract as a series of single-shot transactions has disappeared. For a rights holder, downstream control has many values, and most instances are socially beneficial. The large number of legal doctrines dealing with downstream restraints includes tying and resale price maintenance in antitrust doctrine, and “exhaustion” and licensing restrictions in IP law.¹⁵ The economic rationales include price discrimination, transaction cost savings, elimination of double monopoly markups, strategic exclusion of rivals, limiting reverse engineering, and even controlling the development of secondhand markets.

Finally, our epilogue makes several recommendations for changes in legal policy, many of which can be implemented entirely by the courts.

¹⁵ See Christina Bohannon, *Copyright Preemption of Contracts*, 67 Md. L. Rev. 611 (1008).