

CABINING INTELLECTUAL PROPERTY THROUGH A PROPERTY PARADIGM

MICHAEL A. CARRIER[†]

ABSTRACT

One of the most revolutionary legal changes in the past generation has been the “proPERTIZATION” of intellectual property (IP). The duration and scope of rights expand without limit, and courts and companies treat IP as absolute property, bereft of any restraints. But astonishingly, scholars have not yet recognized that proPERTIZATION also can lead to the narrowing of IP. In contrast to much of the literature, which criticizes the proPERTIZATION of IP, this Article takes it as a given. For the transformation is irreversible, sinking its tentacles further into public and corporate consciousness (as well as the IP laws) with each passing day and precluding the likelihood that IP will return to the preproPERTIZATION era. This Article therefore

Copyright © 2004 by Michael A. Carrier.

[†] Associate Professor, Rutgers University School of Law—Camden. I would like to thank Bob Brauneis, Stacey Dogan, Jay Feinman, Shubha Ghosh, Ellen Goodman, Greg Lastowka, Joe Liu, Rob Merges, Adam Mossoff, Craig Nard, Dennis Patterson, Mark Patterson, Arti Rai, Carol Rose, Henry Smith, Lloyd Weinreb, Diane Zimmerman; participants in the Fourth Annual Intellectual Property Scholars Conference held at DePaul University College of Law, the IP Workshop Series at George Washington University Law School, the First Annual Intellectual Property and Communications Law and Policy Scholars Roundtable held at Michigan State University College of Law, the Rutgers-Camden faculty and junior faculty workshops, and the Villanova Law School speaker series; and especially Kara Moorcroft and the editors of the Duke Law Journal for very helpful comments on drafts of this Article. I would also like to thank Dean Ray Solomon for support, Fran Brigandi for administrative assistance, and Heather Baker, Gabriella Ferri, Jeanine Graham, and Jacek Wypych for excellent research assistance. Finally, I would like to thank my daughter, Jordan Carrier, for demonstrating more patience and industriousness than anyone is reasonably entitled to expect from a nine-month old.

ventures onto a new path, one that follows property into unexpected briar patches of limits. The secret here is that property is not as absolute as it is often claimed to be.

After surveying fifty doctrines in property law, Professor Carrier synthesizes limits based on development, necessity, and equity. He then utilizes these limits to construct a new paradigm for IP. The paradigm facilitates the reorganization of defenses that courts currently recognize as well as a more robust set of defenses, which include (1) a new tripartite fair use doctrine in copyright law, (2) a new defense for public health emergencies and a recovered experimental use defense and reverse doctrine of equivalents in patent law, (3) a development-based limit to trademark dilution, and (4) a functional use defense for the right of publicity. By adopting the paradigm of property, IP has reopened the door to limits. Rediscovering these limits offers significant promise for the future of innovation and democracy.

TABLE OF CONTENTS

Introduction	4
I. The Propertization of Intellectual Property	8
A. Copyrights	13
B. Patents	16
C. Trademarks	19
D. Rights of Publicity	22
II. Intellectual Property and Property: Of Questionable Necessity and Unquestionable Dangers.....	25
A. Property	25
1. The Traditional Story: An Exegesis	25
2. A Critical Look at Property's Traditional Story.....	28
3. The Dangers of Exclusionary Rights in Property.....	30
B. Intellectual Property	31
1. The Traditional Story: An Exegesis	31
2. A Critical Look at Intellectual Property's Traditional Story.....	34
3. The Dangers of Exclusionary Rights in Intellectual Property.....	44
III. The Limits of Property.....	52
A. Development.....	54
1. Right to Exclude: Easements, Capture, Bona Fide Purchasers	55

2.	Right to Transfer: Adverse Possession, Rule Against Perpetuities, Alienation, Tenant's Right to Transfer, <i>Numerus Clausus</i>	58
3.	Right to Use: Zoning, Nuisance, Licenses, Waste, Servitudes.....	62
B.	Necessity.....	65
1.	Right to Exclude: Imminent Necessity, Social Necessity, Free Speech, Easements by Necessity, Private Eminent Domain, Public Trust.....	66
2.	Right to Transfer: Market Inalienability, Eminent Domain.....	70
3.	Right to Use: Takings, Regulation, Lateral Support.....	71
C.	Equity.....	73
1.	Right to Exclude: Encroachments, Good Faith Improvers, Boundary Line Disputes, Bona Fide Purchasers, Public Accommodations	73
2.	Right to Transfer: Recording Statutes, Notice, Fraud, Retaliatory Eviction, Accession, Racial Covenants, Antidiscrimination Statutes, Limits on Caveat Emptor	75
3.	Right to Use: Nuisance, Irrevocable Licenses, Easements, Landlords	79
D.	Matrix of Property Limits	80
IV.	Extrapolation of Property Limits to Intellectual Property	82
A.	Copyright Law	85
1.	Existing Development Limit: Productive Fair Use	86
2.	Existing Necessity Limits: Exclusions, Compulsory Licenses, First Sale.....	90
3.	Existing Equity Limits: Copyright Misuse, Fraud, Estoppel, Laches.....	92
4.	New Proposal: Tripartite Fair Use	95
B.	Patent Law	106
1.	Existing Necessity Limits: Government Appropriation, Sovereign Immunity.....	106
2.	Existing Equity Limits: Inequitable Conduct, Prosecution Laches, Patent Misuse, Exhaustion, Implied License, Repair, Estoppel Limits on the Doctrine of Equivalents, First Inventor Defense.....	110
3.	Recovered Development Proposals: Reverse Doctrine of Equivalents, Experimental Use.....	118
4.	New Necessity Proposal: Public Health Emergencies.....	123

C. Trademark Law	127
1. Existing Necessity Limits: Genericide, Nominative Use, Fair Use, Parody, Functionality.....	127
2. Existing Equity Limits: Laches, Bad Faith Cybersquatting	132
3. Recovered Development Proposal: Dilution Limit	134
D. Right of Publicity Law	139
1. Existing Necessity Limit: First Amendment	139
2. New Necessity Proposal: Functional Use	141
E. Matrix of Intellectual Property Limits	144
Conclusion.....	144

INTRODUCTION

One of the most revolutionary legal changes in the past generation has been the “proPERTIZATION” of intellectual property (IP). The duration and scope of IP rights expand without limit. Courts, commentators, and companies describe IP as a type of absolute property, bereft of any restraints. Examples even make their way into public discourse, as revealed by debates on copyrights that essentially last forever. But astonishingly, some of the most important consequences of this revolution have gone unnoticed. Although scholars have lamented the proPERTIZATION of IP, they have failed to recognize a hidden promise of the transformation: the *narrowing* of IP.

Historically, IP has been characterized by balance. On the one hand, its exclusionary rights provide incentives to create. On the other, its limits preserve roles in the nation’s economy and democracy for competition, cumulative innovation, and free expression. This equipoise is the instruction of the Constitution¹ and has been the lodestar for the courts.² In the past generation, however, the limits of IP have quickly eroded.

As IP has lost its balance, it has increasingly come to resemble property. The essentially unlimited duration and scope of the initial IP right today more closely resemble the unlimited duration and scope of property than the finite regime of protection that the Framers carved out from a general common law of copying. As

1. See U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”).

2. See *infra* note 391 (listing cases that discuss the utilitarian purpose of IP).

dangerous as the descriptive account of the propertization of IP are the normative arguments about this transformation. Many courts and companies today unquestioningly view property as justifying absolute rights of exclusion and a total lack of limits on IP holders.

In contrast to much of the literature, which criticizes this trend, I take the transformation as a given. The propertization of IP is in fact unfortunate. But it also appears to be irreversible. It sinks its tentacles further into public and corporate consciousness (as well as the IP laws) with each passing day, making it unlikely that the country will return to the prepropertization era. I therefore venture onto a new path, one that follows property into unexpected briar patches of limits. For the secret here is that property is not as absolute as it is often claimed to be.

Anyone familiar with property doctrine knows this. Numerous doctrines such as adverse possession, eminent domain, easements, zoning, and the Rule Against Perpetuities bespeak the limits on absolute property rights. These limits, however, did not survive the relocation to IP. In this Article, I survey fifty doctrines of property law, distilling restrictions centered on development, necessity, and equity.

I then import these categories of limits into IP, proposing (1) a tripartite fair use defense in copyright law, (2) a defense for public health emergencies and a recovered experimental use defense and reverse doctrine of equivalents in patent law, (3) a development-based limit to trademark dilution, and (4) a functional use defense for the right of publicity. This limit-based paradigm offers several benefits.

First, it proffers a framework that reflects the shape of IP today, one that, in many instances, has increasingly come to have unlimited scope and duration. Limits that historically were built into the shape of the initial right now must be incorporated into *ex post* defenses in order for IP to serve the finite, instrumental function it was designed to serve.

Second, the paradigm provides a structure that organizes exceptions that courts have episodically created to IP rights. Courts have recognized defenses such as estoppel, laches, fair use, experimental use, the reverse doctrine of equivalents, and genericide to serve certain public policies without grounding such exceptions in an overall, predictable framework. This project locates currently existing exceptions within a new paradigm that provides a stronger justification for the exceptions.

Third, the paradigm offers a structure within which new limits can be created and rationalized. Of course, the IP statutes remain in force and serve legitimate purposes in many cases. But because of the dangers of IP, the questionable need for protection in many instances, and the propertization of the field, it is appropriate for courts and Congress to create new limits.

To be clear, both courts and Congress can play a role in constructing this paradigm. The constitutional grant of authority allows the legislature to act, and the courts also have an essential role in elaborating the contours of IP, including its defenses.³ Certain limits, such as a public health emergency exception in patent law that incorporates a precise definition of “emergency,”⁴ are more naturally amenable to legislative action.⁵ Other limits, such as a reconstructed experimental use doctrine and reverse doctrine of equivalents, given their more fact-specific nature, are more appropriate for judicial implementation.

Before proceeding any further, some definitional caveats are in order. First, “property” and “IP” are not monolithic concepts that are easily defined and cabined. Both function more as umbrellas covering wide ranges of subject matter. Property encompasses acquisition, estates and future interests, relations among owners, leaseholds, land transfers, and land use controls; IP covers patent, copyright, trademark, trade secret, and other state and related doctrines. My use of the concepts does not endeavor to explain every nuance in every doctrine—the multiplicity and variety of subsumed topics precludes this. But what I do attempt is to pave the way for broader conclusions on the rights and defenses in these spheres. In particular, I reveal limits on property and the removal of limits on IP.

Second, by “propertization,” I mean the expansion of the duration and scope of initial rights to approach unlimited dimensions. In property law, fee simple ownership of a plot of land lasts forever

3. See, e.g., *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 585 (noting the “long common-law tradition of fair use adjudication”); *id.* at 578 (requiring courts to consider the statutory fair use factors “in light of the purposes of copyright”).

4. See *infra* notes 632–34 and accompanying text.

5. It is not inconceivable that Congress would in fact enact limits in certain contexts. Cf. Gardiner Harris, *Questions of Security: Bayer Is Accused of Profiteering on Cipro*, WALL ST. J., Oct. 26, 2001, at A6 (explaining that, in response to the anthrax crisis of 2001, Secretary of Health and Human Services Tommy Thompson threatened to “defy Bayer’s patent unless the company lowered its price”). In contrast, it is most unlikely that Congress would act to reduce the initial duration or scope of IP rights.

and grants unlimited rights, including the rights to exclude, use, and transfer. As I discuss below,⁶ courts and legislatures have created subsequent limitations on these rights. But until particular defenses apply, the shape of property is unlimited in duration and in the rights granted.

It is in this sense that IP is increasingly becoming propertized. As I explain in Part I, the duration of IP rights has vastly expanded, especially in copyright law. Moreover, the scope of rights has increased, particularly in copyright, trademark, and right of publicity law.⁷ That defenses exist in IP today does not negate the burgeoning duration and scope of rights. And though “propertization” theoretically could refer to the recognition of defenses to rights, I utilize the term in this Article to refer to the expansive duration and scope of the initial right.

In illustrating the propertization of IP, Part I provides examples of courts’ and companies’ treating IP as absolute property and traces the increased scope and duration of rights in patent, copyright, trademark, and right of publicity law.

Part II turns to the theoretical justifications for, and empirical studies analyzing, property and IP. First, it presents the rationales that traditionally have justified the disciplines. Next, it critically analyzes these stories, finding that the right to exclude is only partially necessary to achieve the stated goals for property and IP. Part II then examines the adverse effects of protection. It concludes that the inaccuracy of the traditional story for IP and the dangerous consequences of protection counsel the utilization of defenses that limit exclusionary rights.

In turning to property law, Part III offers an example of a more measured regime. It surveys the universe of property doctrine and

6. See *infra* Part III.

7. My conclusions as to the increase in the duration and scope of rights do not rely on assumptions about the Framers’ intentions regarding limited IP rights, intentions that recently have been called into question. *E.g.*, Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 337–49 (2004) (failing to find constitutional norms resulting from antimonopoly sentiment during the ratification period); Paul M. Schwartz & William Michael Treanor, Eldred and Lochner: *Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 YALE L.J. 2331, 2375–90 (2003) (rejecting the notion that the Framers generally possessed a “deep antipathy” to monopolies); *cf.* Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History, 1550–1800*, 52 HASTINGS L.J. 1255, 1313–15 (2001) (explaining that common law courts in the eighteenth century applied natural law principles to patent requirements, ensuring that patentees could not obtain overreaching protection).

distills defenses based on development, necessity, and equity. It then highlights numerous examples of these limits.

Part IV takes the categories of defenses extracted from property and applies them to IP. Section A begins with copyright law. It first traces the productive prong of the fair use defense. It then locates within the necessity sphere compulsory licenses, exclusions from copyright infringement, and the first sale defense. Next, it situates within the equity framework defenses based on misuse, fraud, estoppel, and laches. Finally, it offers a new tripartite fair use defense that adds “necessary fair use” and “equitable fair use” to the currently recognized doctrine of productive fair use.

Section B focuses on patent law. It recognizes state sovereign immunity and governmental appropriation as consistent with the necessity limit, and inequitable conduct, fraud, laches, misuse, exhaustion, limits on the doctrine of equivalents, and the prior use of patentable business methods as consistent with the equity theme. Applying the development limit, it proposes a more robust reverse doctrine of equivalents and experimental use doctrine. Finally, it recommends a defense for public health emergencies that is consistent with necessity.

Section C turns to trademark law. It situates the defenses of genericide, nominative use, fair use, parody, and functionality in the necessity sphere and locates the defenses of laches and bad faith (for purposes of the Anticybersquatting Consumer Protection Act) in equity. It then applies the development limit to restrict dilution.

Section D concludes with the right of publicity. It finds that necessity explains the First Amendment limit that many courts have recognized and counsels the adoption of a new defense based upon the functional use of celebrities.

I. THE PROPERTIZATION OF INTELLECTUAL PROPERTY

Multiple strands of IP doctrine demonstrate the propertization of the field.⁸ The various laws illustrate dramatically enlarged scope and

8. Even the use of the phrase “intellectual property” as an umbrella concept contributes to propertization. See William W. Fisher III, *Geistiges Eigentum—ein ausufernder Rechtsbereich: Die Geschichte des Ideenschutzes in den Vereinigten Staaten*, in EIGENTUM IM INTERNATIONALEN VERGLEICH 265 (Hannes Siegrist & David Sugarman eds., 1999) (charting the more frequent use of the phrase beginning in the 1980s), translated in William W. Fisher III, *The Growth of Intellectual Property: A History of Ownership of Ideas in the United States* 22 & n.105 (1999), at <http://cyber.law.harvard.edu/people/tfisher/iphistory.pdf> (unpublished manuscript, on file with the *Duke Law Journal*); Mark A. Lemley, *Romantic Authorship and the*

duration. I focus on patent, copyright, trademark, and right of publicity law in this Article, but the trend reaches beyond these areas to cover (1) the extension to cyberspace of common law doctrines such as trespass to chattels,⁹ (2) the federal criminalization of trade secret law through the Economic Espionage Act,¹⁰ (3) proposed legislation that would create *sui generis* protection for uncopyrightable databases,¹¹ and (4) judicial and legislative protection of software licenses that limit access and use.¹²

Rhetoric of Property, 75 TEX. L. REV. 873, 895 & n.123 (1996) (reviewing JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY (1996)) (explaining that “[t]he idea of propertization begins with a fundamental shift in the rhetoric of intellectual property law” and locating the first modern use of the phrase in the founding of the World Intellectual Property Organization (WIPO) in 1967).

9. See, e.g., *eBay, Inc. v. Bidder’s Edge, Inc.*, 100 F. Supp. 2d 1058, 1060–64, 1069–70 (N.D. Cal. 2000) (granting injunctive relief on a trespass to chattels claim when Bidder’s Edge sent data search and collection robots (often called “spiders”) onto the eBay site to gather information); see also *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393, 404–05 (2d Cir. 2004) (affirming injunctive relief on a trespass to chattels claim against the defendant, who had used search robots to access the plaintiff’s computers and online database in violation of the plaintiff’s terms of use). For criticism of courts’ importation of the trespass to chattels doctrine to cyberspace, see Dan L. Burk, *The Trouble with Trespass*, 4 J. SMALL & EMERGING BUS. L. 27, 32–34 (2000), finding that courts neglect the doctrine’s requirement of substantial interference with chattels, and Dan Hunter, *Cyberspace as Place and the Tragedy of the Digital Anticommons*, 91 CAL. L. REV. 439, 483 (2003), lamenting the courts’ “extraordinarily damaging” resurrection of the tort.

10. 18 U.S.C. §§ 1831–1839 (2000).

11. See e.g., Database and Collections of Information Misappropriation Act, H.R. 3261, 108th Cong. (2003) (providing civil remedies for the misappropriation of uncopyrighted databases); Collection of Information Antipiracy Act, H.R. 354, 106th Cong. (1999) (same); see also Council Directive 96/9 EC on the Legal Protection of Databases, 1996 O.J. (L 77) 20, 24–27 (creating a more uniform database protection scheme for the European Union); SIVA VAIDHYANATHAN, COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY 167 (2001) (predicting that database companies will “hold the keys to” information for a potentially infinite period); J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51, 64–76 (1997) (discussing the rationale for database protection legislation).

12. Such licenses are often characterized as “shrink-wrap” (which become effective when the customer tears the cellophane wrapping from a software package), “click-wrap” (formed when the user clicks on a button indicating agreement to terms), and “browse-wrap” (formed when the user, even without having viewed the terms, performs an act like downloading information). See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1449 (7th Cir. 1996) (“Shrinkwrap licenses are enforceable unless their terms are objectionable on grounds applicable to contracts in general”); Maureen A. O’Rourke, *Common Law and Statutory Restrictions on Access: Contract, Trespass, and the Computer Fraud and Abuse Act*, 2002 U. ILL. J.L. TECH. & POL’Y 295, 297–98 (explaining that although courts generally uphold click-wrap agreements, they disagree on the enforceability of browse-wrap agreements); see also UNIF. COMPUTER INFO. TRANSACTIONS ACT §§ 102–104, 107, 112, 201–211 (2002) (governing the validity of licensing agreements in electronic media), available at www.law.upenn.edu/bll/ulc/ucita/2002final.htm.

The transformation also embraces assertions by courts and companies regarding the absolute nature of property rights that IP now grants.¹³ In continually strengthening IP, courts have characterized it as a type of property.¹⁴ Industry leaders defend

13. These assertions mirror the rhetoric of property, which often is divorced from a more realistic analysis of the discipline. See Robert P. Burns, *Blackstone's Theory of the "Absolute" Rights of Property*, 54 U. CIN. L. REV. 67, 85 (1985) ("Although private property is said to be an absolute right, the protection of which is a primary aim of government, absolute rights are largely sacrificed for the blessings of civil society."); Joan Williams, *The Rhetoric of Property*, 83 IOWA L. REV. 277, 280–83 (1998) ("Many commentators have noted the gap between the political rhetoric of absolute property rights and the practice of limited property rights.").

Contributing to the trend of propertization is the tendency for courts to issue injunctions. See, e.g., ROBERT P. MERGES ET AL., *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 301 (3d ed. 2003) ("When a full trial concludes with a finding of [patent] infringement, there is almost never any doubt that a permanent injunction will issue."); *id.* at 522 ("In civil [copyright] cases, infringement can be—and normally is—enjoined . . ."). IP rights thus present claims that resemble trespass rather than nuisance. See generally Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965, 992–93 (2004) (contrasting trespass actions, which involve strict liability and injunctive remedies, with nuisance actions, which require a balancing of benefits and harms and frequently employ damages remedies).

14. Courts have frequently treated patents as property. See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002) (explaining that the patent laws provide "a temporary monopoly . . . [which] is a property right," and stating that the monopoly's "boundaries should be clear"); *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 642 (1999) (noting that patents "have long been considered a species of property" and thus "are surely included within the 'property' of which no person may be deprived by a State without due process of law"); *Hartford-Empire Co. v. United States*, 323 U.S. 386, 415 (1945) (stating that it "has long been settled" that "a patent is property, protected against appropriation both by individuals and by government," and so courts have not issued antitrust decrees that "amount[] to a forfeiture of the patents"); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir. 1985) (asserting that "[i]t is beyond reasonable debate that patents are property" for purposes of a Fifth Amendment taking); *Schenck v. Norton Corp.*, 713 F.2d 782, 786 n.3 (9th Cir. 1983) (stating that "[t]he patent right is but the right to exclude others, the very definition of 'property,'" and that patents thus are not necessarily monopolies); *Myers v. United States*, 613 F.2d 230, 231 (9th Cir. 1980) (holding that "a patent is property, is depreciable and falls within the purview of § 1239" of the tax code, which "treat[s] as ordinary income" any gain resulting from "the sale or exchange of depreciable property"); *Zoltek Corp. v. United States*, 58 Fed. Cl. 688, 700 (2003) ("[P]atent rights are property that may be taken by eminent domain pursuant to § 1498 . . ."); see also 35 U.S.C. § 261 (2000) ("[P]atents shall have the attributes of personal property.").

In addition, courts frequently have characterized trademarks as property. See, e.g., *Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd.*, 527 U.S. 666, 673 (1999) ("[T]rademarks . . . are the 'property' of the owner because he can exclude others from using them."); *Kmart Corp. v. Cartier, Inc.*, 485 U.S. 176, 185–86 (1988) ("Trademark law . . . confers private rights, which are themselves rights of exclusion. It grants the trademark owner a bundle of such rights, one of which is the right to enlist the Customs Service's aid to bar foreign-made goods bearing that trademark."); *S.F. Arts & Athletics, Inc. v. United States Olympic Comm.*, 483 U.S. 522, 532 (1987) (allowing a trademark holder to prevent the use of the term "Olympic" in "Gay Olympic Games" and stating that "when a word acquires value 'as the result of

against having “their property taken from them.”¹⁵ And several commentators have recommended treating IP as

organization and the expenditure of labor, skill, and money’ by an entity, that entity constitutionally may obtain a limited property right in the word” (quoting *Int’l News Serv. v. Associated Press*, 248 U.S. 215, 239 (1918)); *The Trademark Cases*, 100 U.S. 82, 92 (1879) (asserting that trademark is “a property right”); *Krebs Chrysler-Plymouth, Inc. v. Valley Motors, Inc.*, 141 F.3d 490, 498 (3d Cir. 1998) (concluding that “[t]rademarks are property” and therefore are part of an estate for purposes of bankruptcy proceedings); *Williams & Humbert Ltd. v. W. & H. Trade Marks (Jersey) Ltd.*, 840 F.2d 72, 75 (D.C. Cir. 1988) (holding that “trademarks are property” for purposes of determining intervention of right under FED. R. CIV. P. 24(a)); *Mut. of Omaha Ins. Co. v. Novak*, 836 F.2d 397, 402 (8th Cir. 1987) (“Mutual’s trademarks are a form of property, and Mutual’s rights therein need not ‘yield to the exercise of First Amendment rights under circumstances where adequate alternative avenues of communication exist.’” (citations omitted) (quoting *Lloyd Corp. v. Tanner*, 407 U.S. 551, 567 (1972))); *Dallas Cowboys Cheerleaders, Inc. v. Pussycat Cinema, Ltd.*, 604 F.2d 200, 206 (2d Cir. 1979) (finding that “trademark is in the nature of a property right, and as such it need not yield to First Amendment rights” and stating that a preliminary injunction “is not a case of government censorship, but a private plaintiff’s attempt to protect its property rights” (citations omitted)); *Goldberg v. Cuzcatlan Beverages, Inc. (In re Impact Distribs., Inc.)*, 260 B.R. 48, 57 (Bankr. S.D. Fla. 2001) (holding that a “trademark remains property of the estate” for purposes of bankruptcy proceedings); *Anthony Distribs., Inc. v. Miller Brewing Co.*, 904 F. Supp. 1363, 1366 (M.D. Fla. 1995) (“[T]he trademark is the property of the corporation which can be independently bought or sold.”).

Courts also have treated other forms of IP as property. For example, courts have referred to copyrights as property. *See, e.g.*, *Chavez v. Arte Publico Press*, 204 F.3d 601, 605 n.6 (5th Cir. 2000) (“Since patent and copyright are of a similar nature, and patent is a form of property [within the meaning of the Due Process Clause] . . . copyright would seem to be so too.”); *Lane v. First Nat’l Bank*, 871 F.2d 166, 174 (1st Cir. 1989) (finding that “copyright is property” for purposes of enabling a potential takings claim); *Roth v. Pritkin*, 710 F.2d 934, 939 (2d Cir. 1983) (“An interest in a copyright is a property right protected by the due process and just compensation clauses of the Constitution.”); *E.V.P. v. L.A.P.*, No. CN98-11448, 2001 WL 1857137, at *2 (Del. Fam. Ct. Dec. 4, 2001) (holding that “[c]opyrights are property” for purposes of marital distribution). Courts have also treated the right of publicity as a property right. *See, e.g.*, *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 573 (1977) (stating that the right of publicity is a “proprietary interest”); *Herman Miller, Inc. v. Palazzetti Imps. & Exps., Inc.*, 270 F.3d 298, 325 (6th Cir. 2001) (stating that the right of publicity is a “property right[. . . and therefore can extend beyond death”); *McFarland v. Miller*, 14 F.3d 912, 922 (3d Cir. 1994) (finding the “proprietary” right of publicity to apply beyond death and asserting that the “plaintiffs’ names and likenesses belong to them. . . . [and thus] are property” (quoting *Canessa v. J.I. Kislak, Inc.*, 235 A.2d 62, 76 (N.J. 1967))). Finally, the Supreme Court in *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986 (1984), found that trade secrets recognized as property by a state constituted property for purposes of the Takings Clause. *Id.* at 1003–04.

15. Doug Bedell, *Internet Piracy Enforcement Flounders with Rise of MP3*, DALLAS MORNING NEWS, July 27, 1999, at 1F (quoting Hillary Rosen, former president of the Recording Industry Association of America); *see also, e.g.*, Edmund Sanders & Jube Shiver, Jr., *Digital TV Copyright Concerns Tentatively Resolved by Group*, L.A. TIMES, Apr. 26, 2002, at C5 (quoting Jack Valenti, the president of the Motion Picture Association of America: “We don’t want to shut down innovation. . . . We just want to protect private property from being pillaged.”). *See generally* Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free P2P File Sharing*, 17 HARV. J.L. & TECH. 1, 22 (2003) (citing the statements of Rosen and Valenti).

property.¹⁶ In short, IP is quickly becoming property not only in the essentially unlimited scope and duration of its initial rights but also in the ubiquitous assertions that IP is absolute property.¹⁷ This Part examines the increased scope and duration of copyright, patent, trademark, and right of publicity law.

16. See, e.g., Stephen L. Carter, *Does It Matter Whether Intellectual Property Is Property?*, 68 CHI.-KENT. L. REV. 715, 723 (1993) (lamenting the importance of tangibility in determining protection under property law); Frank H. Easterbrook, *Intellectual Property Is Still Property*, 13 HARV. J.L. & PUB. POL'Y 108, 118 (1990) (arguing that society "should treat intellectual and physical property identically in the law"); I. Trotter Hardy, *Not So Different: Tangible, Intangible, Digital, and Analog Works and Their Comparison for Copyright Purposes*, 26 U. DAYTON L. REV. 211, 213 (2001) ("For the purposes of intellectual property rules and regimes, there are no differences between intangible and tangible property . . ."); cf. Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 275–80 (1977) (explaining the function of patents as "prospects" allowing coordination of investment in innovation, and analogizing patentable inventions to all valuable property, including land).

17. Numerous commentators have criticized this trend. See VAIDHYANATHAN, *supra* note 11, at 11–12 (explaining that, in recent years, "American courts, periodicals, and public rhetoric seem to have engaged almost exclusively in 'property talk' when discussing copyright" and that the framing of issues in terms of "property rights" ends the discussion); Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 274 (2000) ("Once a creative product . . . is recognized as having value, it is assumed that someone has a right to capture that value. Measured against the background of property rights propagation generally, this is a rather novel approach."); Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 130–31 (2004) [hereinafter Lemley, *Justifications*] (criticizing ex post justifications for IP that focus on the management of the work after creation); Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687, 1687–88 (1999) [hereinafter Lemley, *Lanham Act*] (lamenting the propertization of trademarks); Lemley, *supra* note 8, at 895–904 (criticizing the propertization of IP); Jessica Litman, *Breakfast with Batman: The Public Interest in the Advertising Age*, 108 YALE L.J. 1717, 1725 (1999) (recognizing the "inexorable pressure" to treat as property anything having "substantial value" to anyone); Glynn S. Lunney, *Trademark Monopolies*, 48 EMORY L.J. 367, 419 (1999) (noting that the trademark "has become its owner's property not merely in a formal and limited sense, but in an ordinary and increasingly absolute sense," which results in the mark's being used "in circumstances entirely divorced from, and sometimes actually in conflict with, [the] mark's informational role"); Margaret Jane Radin, *Information Tangibility*, in *ECONOMICS, LAW AND INTELLECTUAL PROPERTY: SEEKING STRATEGIES FOR RESEARCH AND TEACHING IN A DEVELOPING FIELD* 395, 400 (Ove Granstrand ed., 2003) (remarking that "analogies to physical property, and invasion of physical property, have regularly substituted for [the balancing arguments typically at the core of IP] because they are showstoppers of persuasion"); Diane Leenheer Zimmerman, *Who Put the Right in the Right of Publicity?*, 9 DEPAUL-LCA J. ART & ENT. L. & POL'Y 35, 51 (1998) (commenting that a "pro-property mind-set has been further encouraged by the gradual recognition that income from intellectual property makes up a very significant part of the United States' balance of payments in the international trade arena").

A. Copyrights

In the past century, and particularly in the past generation, the duration and scope of copyright have expanded dramatically. The extension of the copyright term has garnered the most attention. The U.S. copyright term was initially fourteen years, with a potential renewal term of another fourteen years.¹⁸ In 1831, Congress lengthened the maximum possible term from twenty-eight to forty-two years,¹⁹ and it extended this term to fifty-six years in 1909.²⁰ Later, in the Copyright Act of 1976,²¹ Congress provided that new works would receive protection for the life of the author plus fifty years.²² Finally, the Sonny Bono Copyright Term Extension Act of 1998²³ added twenty additional years of protection to this term. Thus, the current copyright term is the life of the author plus seventy years.²⁴

18. Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124.

19. Act of Feb. 3, 1831, ch. 16, §§ 1–2, 4 Stat. 436, 436–37.

20. Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, § 23, 35 Stat. 1075, 1080 (current version at 17 U.S.C. §§ 301–304 (2000)). Starting in 1962, Congress incrementally extended the copyright term nine times within twelve years, ultimately reaching a maximum potential term of seventy years. Act of Sept. 19, 1962, Pub. L. No. 87-668, 76 Stat. 555 (fifty-nine years); Act of Aug. 28, 1965, Pub. L. No. 89-143, 79 Stat. 581 (sixty-one years); Act of Nov. 16, 1967, Pub. L. No. 90-141, 81 Stat. 464 (sixty-two years); Act of July 23, 1968, Pub. L. No. 90-416, 82 Stat. 397 (sixty-three years); Act of Dec. 16, 1969, Pub. L. No. 91-147, 83 Stat. 360 (sixty-four years); Act of Dec. 17, 1970, Pub. L. No. 91-555, 84 Stat. 1441 (sixty-five years); Act of Nov. 24, 1971, Pub. L. No. 92-170, 85 Stat. 490 (sixty-six years); Act of Oct. 25, 1972, Pub. L. No. 92-566, 86 Stat. 1181 (sixty-eight years); Act of Dec. 31, 1974, Pub. L. No. 93-573, § 104, 88 Stat. 1873, 1873 (seventy years). See generally Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409, 416–17 (2002).

21. Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (current version at 17 U.S.C. § 304 (2000)).

22. *Id.* § 302, 90 Stat. at 2572 (current version at 17 U.S.C. § 304 (2000)). The maximum term for works already in existence was extended to seventy-five years in the same act. *Id.* § 304, 90 Stat. at 2573 (current version at 17 U.S.C. § 304 (2000)).

23. Pub. L. No. 105-298, § 102, 112 Stat. 2827, 2827 (codified at 17 U.S.C. § 302(a) (2000)).

24. *Id.* For corporate, anonymous, or works-for-hire authors, the copyright lasts until the earlier of 95 years from publication or 120 years from creation. 17 U.S.C. § 302(c) (2000). The Supreme Court in *Eldred v. Ashcroft*, 537 U.S. 186 (2003), recently upheld the extension, deferring to Congress on the issue. *Id.* at 222 (refusing to “second guess” the “wisdom of Congress’s action” in extending the copyright term).

Such dramatic extensions would not appear to be supported by copyright’s objectives. From the perspective of utilitarianism, the compensation gain from the additional twenty years of protection has a present value of less than 1 percent, thus not providing any meaningful incentive to create copyrighted works. See *Eldred*, 537 U.S. at 254–55 (Breyer, J., dissenting) (“[I]t seems fair to say that, for example, a 1% likelihood of earning \$100 annually for 20 years, starting 75 years into the future, is worth less than seven cents today.”); Brief of Amici Curiae George A. Akerlof et al. at 15, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618) (“Comparing the main economic benefits and costs of the CTEA, it is difficult to understand

Accompanying these extensions of copyright duration are increasingly powerful rights granted to copyright holders. Copyright law initially protected only against copying,²⁵ allowing uses such as translations, abridgements, and public performances.²⁶ The rights protected by copyright then gradually expanded, with the Copyright Act of 1870 granting “the right to dramatize or translate,”²⁷ the Copyright Act of 1909 providing the right to make translations,²⁸ and the 1976 Act granting the exclusive right to prepare derivative works.²⁹ This expansion has greatly increased the power of copyright holders: protection for derivative works, for example, reserves for copyright holders the ability to exploit their works in secondary markets and provides no rights to those who improve copyrightable expression without the consent of copyright holders.³⁰

[copyright] term extension for both existing and new works as an efficiency-enhancing measure.”). Nor is there any guarantee that the copyright term will not continue to lengthen as popular icons begin once again edging nearer to the brink of the public domain.

25. Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124 (granting the exclusive right to “print, reprint, publish, or vend the [work]”).

26. See *Lawrence v. Dana*, 15 F. Cas. 26, 59 (C.C.D. Mass. 1869) (No. 8136) (holding that an abridgment is not an infringement); *Stowe v. Thomas*, 23 F. Cas. 201, 208 (C.C.E.D. Pa. 1853) (No. 13,514) (holding that a translation is not an infringement); VAIDHYANATHAN, *supra* note 11, at 11 (noting that copyright “was originally a narrow federal policy that granted a limited trade monopoly in exchange for universal use and access”); Glynn S. Lunney, Jr., *Reexamining Copyright’s Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 535–36 (1996) (explaining that nineteenth-century courts found copyright infringement only when a defendant’s reuse of material “would supersede or displace demand for copies of the plaintiff’s original”); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 386 (1996) (noting that the Framers envisioned copyright as “a narrow, short-term right to make literal or near-literal copies of printed material”); Netanel, *supra* note 15, at 23 (noting that copyrighted works could be used in numerous ways, including recitation in public, making copies by hand, and creating and publishing translations and abridgements).

27. Act of July 8, 1870, ch. 230, § 86, 16 Stat. 198, 212 (current version at 17 U.S.C. § 101 (2000)).

28. Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, 35 Stat. 1075, 1075 (current version at 17 U.S.C. § 101 (2000)).

29. Derivative works include “translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.” Copyright Act of 1976, Pub. L. No. 94-553, ch. 1, § 101, 90 Stat. 2541, 2542 (codified at 17 U.S.C. § 101 (2000)). Such works historically were not viewed as infringements. See *Stowe*, 23 F. Cas. at 201–08 (holding that a German translation of *Uncle Tom’s Cabin* was not an infringement); Guy Pessach, *Copyright Law as a Silencing Restriction on Noninfringing Materials: Unveiling the Scope of Copyright’s Diversity Externalities*, 76 S. CAL. L. REV. 1067, 1068 n.2 (2003) (noting types of derivative works that formerly were not considered infringements).

30. See 17 U.S.C. § 103(a) (2000) (providing that “protection for a work employing preexisting material in which copyright subsists does not extend to any part of the work in which such material has been used unlawfully”); see also Mark A. Lemley, *The Economics of*

Most recently, the Digital Millennium Copyright Act (DMCA)³¹ has strengthened the rights of copyright holders. Among other things, the DMCA prevents the “circumvent[ion of] a technological measure that effectively controls access to a [protected] work.”³² To the extent that works are increasingly accessed in digital form, copyright holders thus have greater control over the use of their works. For example, the anticircumvention provisions of the DMCA allow copyright holders to block access to uncopyrightable parts of works, parts that have entered the public domain, and parts for which unlicensed access would otherwise have been allowable under the fair use defense.³³

The effects of copyright’s increased duration and scope are magnified by its expanded subject matter: more and more categories of works are protectable, and the public domain is shrinking.³⁴ As one

Improvement in Intellectual Property Law, 75 TEX. L. REV. 989, 1062–63 (1997) (proposing that copyright improves own their original contributions to the initial creation).

31. Pub. L. No. 105-304, 112 Stat. 2860 (codified in scattered sections of 17 U.S.C.).

32. 17 U.S.C. § 1201(a)(1)(A). The statute defines circumventing a technological measure to include descrambling a scrambled work, decrypting an encrypted work, or otherwise avoiding, bypassing, removing, deactivating, or impairing a technological measure, without the authority of the copyright owner, to gain access to the protected work. *Id.* § 1201(a)(3)(A),

33. *E.g.*, David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673, 702–40 (2000). For example, the provisions could punish a researcher’s quotation of a few sentences from a public domain work that has had copyrightable expression added and that is available only under a technological protection measure. *Id.* at 727, 730–32; *see also, e.g.*, *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 439, 459–60 (2d Cir. 2001) (finding a DMCA violation when the defendant posted on a website the code for a computer program that could circumvent an encryption scheme preventing the copying of DVDs); Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to be Revised*, 14 BERKELEY TECH. L.J. 519, 545 (1999) (providing an example of a reporter who cannot access newsworthy information obtained from a whistle-blowing employee without circumventing the employer’s technological protection system and thus running afoul of the DMCA).

34. The 1790 Copyright Act applied only to books, maps, and charts. Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124. The nineteenth century saw an expansion to engravings and prints, Act of Apr. 29, 1802, ch. 36, § 2, 2 Stat. 171, 171; musical compositions, Act of Feb. 3, 1831, ch. 16, § 1, 4 Stat. 436, 436; dramatic works, Act of Aug. 18, 1856, ch. 169, 11 Stat. 138, 139; photographs, Act of Mar. 3, 1865, ch. 126, § 1, 13 Stat. 540, 540; and paintings, drawings, and sculptures, Act of July 8, 1870, ch. 230, § 86, 16 Stat. 198, 212B. Growth continued in the twentieth century with the application of copyright protection to motion pictures, computer programs, sound recordings, dance, and architectural works. *See* Act of Aug. 24, 1912, Pub. L. No. 62-303, ch. 356, 37 Stat. 488, 488 (expanding copyright to include motion pictures); George D. Cary, *Copyright Registration and Computer Programs*, 11 BULL. COPYRIGHT SOC’Y 362, 362–63 (1964) (explaining how the Copyright Office began to accept registration of computer programs in 1964); Copyright Act of 1976, Pub. L. No. 94-553, ch. 1, § 102, 90 Stat. 2541, 2544–34 (codified as amended at 17 U.S.C. § 102 (2000)) (amending copyright law to protect computer programs); Act of Oct. 15, 1971, Pub. L. No. 92-140, 85 Stat. 391, 391 (protecting

commentator has synthesized: “We have gone from a regime where a tiny part of creative content was controlled to a regime where most of the most useful and valuable creative content is controlled for every significant use.”³⁵

B. Patents

The axes of scope and duration provide less support for the proprietization of patents. Although both have increased, the trend is less pronounced in this field than in the other areas that this Part explores.

In the past generation, the scope of patentees’ rights has become more powerful through stronger enforcement. Two decades ago, many courts were hostile to patent claims.³⁶ Parties challenging patents could relitigate the issue of a patent’s validity in multiple circuits, which encouraged forum shopping.³⁷ The creation of the Federal Circuit in 1982 reversed this trend.³⁸ The court has increased uniformity and enhanced predictability.³⁹ Patents are more valuable

sound recordings); Copyright Act of 1976, Pub. L. No. 94-553, ch. 1, § 101, 90 Stat. 2541, 2543 (codified as amended at 17 U.S.C. § 101 (2000)) (protecting dance); Architectural Works Copyright Protection Act, tit. 7, § 702-03, 104 Stat. 5133, 5133 (1990) (codified in scattered sections of 17 U.S.C.) (protecting building design). *See generally* EDWARD SAMUELS, *THE ILLUSTRATED STORY OF COPYRIGHT* 131-50 (2000) (chronicling the historical expansion of protectable works). Additionally, without legislative amendments, courts interpreted copyright law to encompass radio in the 1920s, television in the 1950s, and the Internet in the 1990s. Edward Samuels, *Can Our Current Conception of Copyright Law Survive the Internet Age?*, 46 N.Y.L. SCH. L. REV. 221, 221 (2002-2003).

The removal of prerequisites for copyrightability has also strengthened copyright. *See* MERGES ET AL., *supra* note 13, at 338-43 (tracing the weakening of the four formal requirements for copyright protection: notice, publication, registration, and deposit); *cf.* LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* 106 (2001) (explaining that, between 1790 and 1799, 556 copyright registrations were filed out of the 13,000 titles published in the United States).

35. LESSIG, *supra* note 34, at 107.

36. Marion T. Bennett, *The United States Court of Appeals for the Federal Circuit—Origins*, in *THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT: A HISTORY 1982-1990* 1, 10 (1991).

37. *See* Pauline Newman, *The Federal Circuit—A Reminiscence*, 14 GEO. MASON U. L. REV. 513, 516 (1992) (“[T]he fate of duly examined and issued patents had become so uncertain in the courts as to place a cloud on patent-based investment.”).

38. Congress created the court in the Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (codified at 28 U.S.C. § 1 (2000)).

39. *See* R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1179 (2004) (concluding that the court’s “effort to meet its mandate is both well underway and moving in the right direction”).

today than they were before the creation of the court,⁴⁰ and claims of a propatent bias on the part of the court are not uncommon.⁴¹

Not only has the scope of patent rights expanded, but their effective duration has lengthened as patents have increasingly been utilized in industries with product generation lifecycles shorter than twenty years.⁴² In recent years, the large number of patents issued for software, Internet business methods, and semiconductors has ensured that many patents cover multiple generations of products. Such a trend increases the effective length of patents by allowing patentees to appropriate rewards not only from the generation of products that they anticipated might stem from an innovation but also from later-developed generations that they might not have anticipated.⁴³

Several additional factors compound the effects of the increased scope and duration of patent rights. First is the expansion of subject

40. *Id.* at 1116; see John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205–06 (1998) (noting that courts increasingly found patents valid after the creation of the Federal Circuit); Glynn S. Lunney, Jr., *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 SUP. CT. ECON. REV. 1, 2 (2004) (explaining that under Federal Circuit case law patents have become routinely valid, though narrowly enforced); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1111–12 (2003) (describing doctrinal trends evidencing stronger patents).

41. See, e.g., WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 334–36 (2003) (explaining that the Federal Circuit was likely to be propatent because of its identification with the statutory scheme). A recent study concludes that “the creation of the Federal Circuit appears to have had a positive and significant impact on the number of patent applications, the number of patents issued, the success rate of patent applications, the amount of patent litigation, and possibly the level of R&D expenditures.” *Id.* at 352.

42. The formal length of protection in 1994 increased from seventeen years from the date of issuance to twenty years from the date of application to come into compliance with the General Agreement on Tariffs and Trade (GATT). Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 31, 33 I.L.M. 81 (1994) [hereinafter TRIPS Agreement]. Because of the time necessary for the Patent and Trademark Office (PTO) examination, however, this change has not resulted in a significant difference in the duration of patent protection.

43. See Bruce Abramson, *Promoting Innovation in the Software Industry: A First Principles Approach to Intellectual Property Reform*, 8 B.U. J. SCI. & TECH. L. 75, 101 n.128 (2002) (“In many industries, the first few years of protection are generally considered to be the most valuable. . . . By the time that a patent reaches its latter years, future generations and/or superior technologies are likely to have overtaken the protected invention.”). The trend also conflicts with patent law doctrines that prevent control over multiple generations. See Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAL. L. REV. 1, 47 (2001) (“[T]he desire to preserve incentives coexists with other doctrines, including the reverse doctrine of equivalents, designed to ensure that issued patents do not cut too deep a generational swath.”); *infra notes* 584–96 and accompanying text.

matter, with court decisions since 1980 extending patent protection most notably to biotechnology,⁴⁴ computer software,⁴⁵ and business methods.⁴⁶ Second, the weakening of the link between patents and

44. In *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), the Supreme Court expanded the scope of patentable subject matter to encompass live, human-made microorganisms. *Id.* at 305–09. The Court construed the patent laws broadly, famously stating that they include “anything under the sun that is made by man.” *Id.* at 309 (citing S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)). As a result of the *Chakrabarty* decision, the field of biotechnology rapidly developed, with biomedical research tools and even genes, proteins, and gene fragments receiving patents. See FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, at 1-21 (2003) [hereinafter FTC INNOVATION REPORT] (noting that representatives of the biotechnology industry traced the beginning of the industry to the *Chakrabarty* decision). Further contributing to the growth of the industry was the passage of the Bayh-Dole Act, Pub. L. No. 96-517, § 6(a), 94 Stat. 3015, 3019–28 (1980) (codified as amended at 35 U.S.C. §§ 200–212 (2000)), which endeavored “to use the patent system to promote the utilization of inventions arising from federally supported research or development,” 35 U.S.C. § 200 (2000).

45. In *Diamond v. Diehr*, 450 U.S. 175 (1981), the Court expanded the scope of patentable subject matter to cover a claim that included the use of a software program, treating the claim as “a process for molding rubber products,” rather than “an attempt to patent a mathematical formula,” and explaining that a claim does not become unpatentable “simply because it uses a mathematical formula, computer program, or digital computer.” *Id.* at 187–91; see also *In re Alappat*, 33 F.3d 1526, 1543–45 (Fed. Cir. 1994) (en banc) (expanding patentability further to protect “a computer operating pursuant to software”).

46. In *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), the Federal Circuit found that mathematical algorithms were patentable as long as they had a “useful, concrete, and tangible result.” *Id.* at 1373; see also *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1354–58 (Fed. Cir. 1999) (upholding the method for “generating a message record for an interexchange call” and finding that generation of such records was useful). The Federal Circuit has also rejected the special subject matter exception for “business methods,” paving the way for the patenting of one-click ordering systems, online auctions, and other methods of doing business on the Internet. See *State Street*, 149 F.3d at 1375 (holding that business methods are “subject to the same legal requirements for patentability as applied to any other processor method”). Not surprisingly, business method patent applications have increased significantly since the *State Street* decision, from 925 in 1997, John Hackett, *Software Patent*, BANK TECH. NEWS, Mar. 2001, at 25, to approximately 10,000 in 2001, Wynn Coggins, *Business Methods Still Experiencing Substantial Growth: Reports of Fiscal Year 2001 Statistics*, at <http://www.uspto.gov/web/menu/pbmethod/fy2001strport.html> (last visited Oct. 16, 2004) (on file with the *Duke Law Journal*).

The range of patentable subject matter has increased in other areas as well. See Plant Patent Act, 35 U.S.C. §§ 161–164 (allowing patents for asexually reproduced plants); Plant Variety Protection Act of 1970, 7 U.S.C. § 2402(a) (2000) (allowing patents for sexually reproduced or tuber-propagated plants); *J.E.M. AG Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124, 138–39 (2001) (allowing patents for sexually reproduced plants).

Based in part on this expansion, patent applications have doubled since 1991 and continue to increase at a rate of 10 percent per year, stretching the PTO to its limit, and reducing the level of scrutiny applied to most applications. FTC INNOVATION REPORT, *supra* note 44, Exec. Summary, at 9–10 (noting that for each patent application, examiners “have from 8 to 25 hours to read and understand each application, search for prior art, evaluate

innovation has magnified the effects of scope and duration extensions. The increase in the importance of non-patent-based incentives for innovation has ensured that, in most industries—with the exception of a few, such as pharmaceuticals—patents are less crucial for innovation than they historically have been.⁴⁷ Many firms today obtain patents to have leverage in negotiations with competitors, to prevent infringement lawsuits,⁴⁸ or for use as a “signaling device”⁴⁹ to consumers, competitors, or investors.⁵⁰ Such uses increase the dangers inherent in the expanding scope and effective duration of patents.

C. Trademarks

Historically, preventing customer confusion has been the purpose of trademark law. Trademarks reduce search costs by allowing customers to ascertain the link between a product and its manufacturer without directly investigating the product’s characteristics.⁵¹ Relatedly, trademarks encourage product quality by

patentability, communicate with the applicant, work out necessary revisions, and reach and write up conclusions”).

47. See *infra* Part II.B.2.b.

48. See WESLEY M. COHEN ET AL., PROTECTING THEIR INTELLECTUAL ASSETS: APPROPRIABILITY CONDITIONS AND WHY U.S. MANUFACTURING FIRMS PATENT (OR NOT) 17 (Nat’l Bureau of Econ. Research, Working Paper No. 7552, 2000) (stating that firms seek patents to prevent competitors from patenting related inventions, to strengthen their bargaining position, to prevent infringement lawsuits, and to enhance their reputation); 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, 125 (2001) (stating that firms may seek patents strategically in an attempt to build their “rights to exclude”).

49. John R. Allison et al., *Valuable Patents*, 92 GEO. L.J. 435, 436 & n.6 (2004).

50. Mark A. Lemley, *Reconceiving Patents in the Age of Venture Capital*, 4 J. SMALL & EMERGING BUS. L. 137, 147 (2000); see Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 627–28 (2002) (“[F]irms may choose to obtain and use a portfolio of patent rights to signal information about themselves that would be more expensive to convey through other means.”).

51. See *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163–64 (1995):

“[T]rademark law, by preventing others from copying a source-identifying mark, ‘reduce[s] the customer’s costs of shopping and making purchasing decisions,’ for it quickly and easily assures a potential customer that [a particular item] is made by the same producer as other similarly marked items that he or she liked (or disliked) in the past.”

(second alteration in original) (quoting 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2.01[2] (3d. ed. 1992)); William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 270 (1987) (“The value of a trademark is the saving in search costs made possible by the information or reputation that the trademark conveys or embodies about the brand . . .”).

allowing consumers to attribute credit (or blame) to appropriate manufacturers.⁵² In the past two decades, however, trademark law has expanded beyond these finite aims. In particular, trademark rights have expanded through dilution, trade dress, and other developments to the point that trademark rights are beginning to resemble a type of “property right in gross.”⁵³ The potentially infinite duration of trademark rights (assuming a mark’s use in commerce) magnifies the impact of these developments.⁵⁴

With the creation of a federal cause of action for dilution in the Federal Trademark Dilution Act,⁵⁵ trademark holders no longer need to demonstrate customer confusion to prevail in a cause of action; they need only show that the use of the same or a similar brand name in a different, noncompeting market will “dilut[e] the distinctive quality of the[ir] mark.”⁵⁶ Although Congress intended the dilution cause of action to apply only to famous marks,⁵⁷ courts have watered down the requirement of fame by expansively interpreting the concept,⁵⁸ analyzing fame in local markets,⁵⁹ and assuming that marks are famous.⁶⁰

52. *Qualitex*, 514 U.S. at 164 (noting that trademark law allows producers to “reap the financial, reputation-related rewards associated with a desirable product,” which will, in turn, “encourage the production of quality products”); *Park ‘N Fly, Inc. v. Dollar Park & Fly, Inc.*, 469 U.S. 189, 198 (1985) (explaining that trademarks promote quality goods “by securing to the producer the benefits of good reputation”).

53. *See, e.g.*, Robert N. Klieger, *Trademark Dilution: The Whittling Away of the Rational Basis for Trademark Protection*, 58 U. PITT. L. REV. 790, 851–63 (1997) (contending that dilution grants a property right in gross to trademark owners); Lemley, *Lanham Act*, *supra* note 17, at 1687–88 (“Commentators and even courts increasingly talk about trademarks as property rights; as things valuable in and of themselves, rather than for the product goodwill they embody.”).

54. *See* 15 U.S.C. § 1059 (2000) (providing for renewal of trademark registration every ten years upon payment of a fee); *see also id.* § 1125(a)(1) (establishing that a person using the mark in commerce “shall be liable in a civil action by any person who believes [he] . . . is likely to be damaged by such act”).

55. *Id.* §§ 1125(c), 1127. Although at least half of the states had passed antidilution laws as of 1995, *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418, 430 (2003), the federalization of dilution law markedly increased its influence. *See* Lemley, *Lanham Act*, *supra* note 17, at 1698–99 (noting that the “most recent attention has been focused on the federal dilution statute”).

56. 15 U.S.C. § 1125(c)(1). Dilution refers to “the lessening of the capacity of a famous mark to identify and distinguish goods or services.” *Id.* § 1127.

57. *See infra* note 704.

58. *See, e.g.*, *Wilcom Pty. Ltd. v. Endless Visions*, 128 F. Supp. 2d 1027, 1033 (E.D. Mich. 1998) (finding Wilcom embroidery software to be famous); *Teletech Customer Care Mgmt., Inc. v. Tele-Tech Co.*, 977 F. Supp. 1407, 1413 (C.D. Cal. 1997) (concluding that Teletech telephone and Internet customer care was famous); *Intermatic, Inc. v. Toeppen*, 947 F. Supp. 1227, 1239 (N.D. Ill. 1996) (finding Intermatic electronics to be famous).

In addition to gaining strength through the doctrine of dilution, trademark law has become more potent in its protection of “trade dress,” the overall appearance of a product.⁶¹ In *Two Pesos, Inc. v. Taco Cabana, Inc.*,⁶² the Supreme Court held that inherently distinctive restaurant decor could receive trademark protection without a showing of secondary meaning (consumer association of a product with a source).⁶³ In *Wal-Mart Stores, Inc. v. Samara Brothers*,

59. See, e.g., *Times Mirror Magazines v. Las Vegas Sporting News*, 212 F.3d 157, 164 (3d Cir. 2000) (finding that a sports periodical was famous in a “niche market” and stating that it was “persuaded that a mark not famous to the general public is nevertheless entitled to protection from dilution where both the plaintiff and defendant are operating in the same or related markets, so long as the plaintiff’s mark possesses a high degree of fame in its niche market”); *Gazette Newspapers, Inc. v. New Paper, Inc.*, 934 F. Supp. 688, 696–97 (D. Md. 1996) (concluding that a local newspaper, *Gazette*, was famous); *Wawa, Inc. v. Haaf*, 40 U.S.P.Q.2d (BNA) 1629, 1631 (E.D. Pa. 1996) (finding the “Wawa” convenience store chain in Pennsylvania to be famous); see also *Wedgwood Homes, Inc. v. Lund*, 659 P.2d 377, 383 (Or. 1983) (holding that the state antidilution law applied to a home builder who was “locally famous” in eastern Washington County, Oregon). See generally MERGES ET AL., *supra* note 13, at 640 (noting that some courts “have significantly reduced the standard for fame by finding that a mark can be ‘famous’ in a narrow product market”).

60. See, e.g., *Panavision Int’l v. Toeppen*, 141 F.3d 1316, 1324 (9th Cir. 1998) (explaining that the parties did not dispute the issue of fame); *Archdiocese of St. Louis v. Internet Entm’t Group*, 34 F. Supp. 2d 1145, 1146 (E.D. Mo. 1999) (failing to examine the fame of the marks “Papal Visit 1999,” “Pastoral Visit,” “1999 Papal Visit Official Commemorative Items,” and “Papal Visit 1999, St. Louis”). The Supreme Court recently limited the scope of dilution by requiring a showing of actual (as opposed to likely) harm, although it liberally construed the requirement. See *Moseley*, 537 U.S. at 432–34 (noting that a requirement of actual harm “does not mean that the consequences of dilution, such as an actual loss of sales or profits, must also be proved”); Stacey L. Dogan, *An Exclusive Right to Evoke*, 44 B.C. L. REV. 291, 314–15 (2003) (contending that the court “nominally” adopted the actual harm standard).

61. See 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 8:1, at 8-2 (1996) (explaining that trade dress is “the totality of any elements in which a product or service is packaged or presented” and that “[these] elements combine to create the whole visual image presented to customers”). One particularly noteworthy example is a court’s protection of a plaintiff’s “unique combination of features,” including “its name, date, . . . distinctive registration process, location, and the color and design of plaintiff’s registration forms.” *Toy Mfrs. of Am. v. Helmsley-Spear, Inc.*, 960 F. Supp. 673, 680 (S.D.N.Y. 1997); see also *Heller v. Lexton-Ancira Real Estate Fund, Ltd.*, 809 P.2d 1016, 1021 (Colo. Ct. App. 1990) (protecting a “trade show organized and promoted in a specific manner, held at a specific location on specific dates, and frequented by specific buyers and exhibitors”), *rev’d on other grounds*, 826 P.2d 819 (Colo. 1992).

62. 505 U.S. 763 (1992).

63. *Id.* at 774–75. The Court stated that requiring producers of inherently distinctive trade dress to show secondary meaning “would hinder improving or maintaining the producer’s competitive position” and would “creat[e] particular burdens on the startup of small companies.” A manufacturer can show secondary meaning by demonstrating that “the primary significance of a product feature or term [for the public] is to identify the source of the product rather than the product itself.” *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 851 n.11 (1982).

Inc.,⁶⁴ the Court confirmed that product design also could receive protection, albeit with a showing of secondary meaning.⁶⁵

Another area of expansion in trademark law involves the trademarks themselves becoming a valuable commodity.⁶⁶ Consumers buy clothing or hats featuring the marks of sports teams or blockbuster movies, for example, not because such marks link these products with their manufacturers but because they desire the marks themselves.⁶⁷ The ability of trademark holders to prevent others' use of their marks in circumstances not creating confusion represents an expansion of trademark rights that does not promote the source-mark link, the traditional focus of trademark law.⁶⁸

D. *Rights of Publicity*

The state law right of publicity provides the final example of an IP doctrine that has become propertized.⁶⁹ The right of publicity prevents the appropriation of an individual's name or likeness for

64. 529 U.S. 205 (2000).

65. *Id.* at 216. For examples of product design and packaging that courts have recognized as trade dress, such as a golf course, the shape of a faucet handle, the diamond shape of a lollipop, and the shape of a mixer, see 1 MCCARTHY, *supra* note 61, § 8:4, at 8-13 to 8-16.

66. Lemley, *Lanham Act*, *supra* note 17, at 1706; *see also* Alex Kozinski, *Trademarks Unplugged*, 68 N.Y.U. L. REV. 960, 962 (1993) ("Where trademarks once served only to tell the consumer who made the product, they now often enhance it or become a functional part of it." (footnote omitted)).

67. Lemley, *Lanham Act*, *supra* note 17, at 1706.

68. Other evidence demonstrates the expansion and propertization of trademark. First is the increased acceptance of assignments in gross and unsupervised licenses, which—in their divorcing of rights to the mark from the manufacture of the product—fail to prevent (and may actually increase) customer confusion. *Id.* at 1709. In addition, courts have created generous categories of confusion from which consumers must be protected, including initial interest confusion, Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777, 801–12 (2004), and "after-market confusion, reverse confusion, subliminal confusion, confusion about the possibility of sponsorship or acquiescence, and even confusion about what confusion the law makes actionable," Litman, *supra* note 17, at 1722 (footnotes omitted).

69. Approximately thirty-one states have recognized the right of publicity, sixteen by common law and fifteen by statute. MERGES ET AL., *supra* note 13, at 789; *see also* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1, 20, 68 (2000) (describing the role of courts in recognizing and expanding the right of publicity). California offers a typical statutory example: "Any person who knowingly uses another's name, voice, signature, photograph, or likeness, in any manner . . . for purposes of advertising or selling . . . without such person's prior consent . . . shall be liable for any damages sustained by the person or persons injured as a result thereof." CAL. CIV. CODE § 3344(a) (West 2003).

commercial advantage.⁷⁰ The right has burgeoned in scope and duration in the past generation.

First, the scope of the right has expanded. Created from the common law right of privacy,⁷¹ the right of publicity initially applied only to the names and photographs of famous people.⁷² But today the right of publicity covers nearly every conceivable aspect of identity.⁷³ It has applied to voice soundalikes, as, famously, when Ford used singers who sounded like Bette Midler in its advertisements.⁷⁴ It has covered a performer's style, such as Guy Lombardo's public personality as "Mr. New Year's Eve,"⁷⁵ and acts, such as a human cannonball performance.⁷⁶ It has embraced catchphrases, such as the "Here's Johnny" phrase associated with Johnny Carson.⁷⁷ It has applied to actors playing television characters⁷⁸ and to

70. RESTATEMENT (SECOND) OF TORTS § 652C (1976); MERGES ET AL., *supra* note 13, at 795. The right was first recognized by a court in *Haelan Laboratories, Inc. v. Topps Chewing Gum, Inc.*, 202 F.2d 866, 809 (2d Cir. 1953), was buttressed by an influential article, Melville Nimmer, *The Right of Publicity*, 19 LAW & CONTEMP. PROBS. 203, 215–23 (Winter 1954), and was acknowledged by the Supreme Court in *Zacchini v. Scripps-Howard Broadcasting Co.*, 433 U.S. 562, 575–76 (1977).

71. *E.g.*, Dogan, *supra* note 60, at 303 n.80.

72. Zimmerman, *supra* note 17, at 45; *see Abdul-Jabaar v. Gen. Motors Corp.*, 85 F.3d 407, 415–16 (9th Cir. 1996) (finding that basketball legend Kareem Abdul-Jabaar's right of publicity extended to his former name, Lew Alcindor); *Onassis v. Christian Dior-N.Y., Inc.*, 472 N.Y.S.2d 254, 263–64 (Sup. Ct. 1984) (awarding an injunction against a photo look-alike of Jacqueline Onassis).

73. *See* David S. Welkowitz, *Catching Smoke, Nailing Jell-O to a Wall: The Vanna White Case and the Limits of Celebrity Rights*, 3 J. INTELL. PROP. L. 67, 88 (1995) (noting that "publicity rights seem almost unlimited in scope").

74. *See* *Midler v. Ford Motor Co.*, 849 F.2d 460, 463 (9th Cir. 1988) (explaining that the common law right of publicity confers "property rights," and holding that the imitation of a distinctive and widely known voice for commercial purposes violates this right); *see also* *Waits v. Frito-Lay, Inc.*, 978 F.2d 1093, 1110 (9th Cir. 1992) (finding that an advertiser that hired a singer to imitate the voice of Tom Waits violated Waits's right of publicity).

75. *See* *Lombardo v. Doyle, Dane & Bernbach, Inc.*, 396 N.Y.S.2d 661, 664 (App. Div. 1977) (explaining that "[t]he combination of New Year's Eve, balloons, party hats, and 'Auld Lang Syne' . . . might amount to an exploitation of [Guy Lombardo's forty-year] carefully and painstakingly built public personality").

76. *See* *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 569–79 (1977) (applying the right to a fifteen-second human cannonball act replayed in its entirety on television).

77. *See* *Carson v. Here's Johnny Portable Toilets, Inc.*, 698 F.2d 831, 836 (6th Cir. 1983) (holding that Johnny Carson's right of publicity was violated by a portable-toilet company named "Here's Johnny").

78. *See* *Wendt v. Host Int'l*, 125 F.3d 806, 810–13 (9th Cir. 1997) (finding that two actors from the television sitcom *Cheers* could invoke the right of publicity by claiming that robots resembled the actors themselves (George Wendt and John Ratzenberger) rather than the characters whom they played on television (Norm and Cliff)); *see also* *McFarland v. Miller*, 14

racecars.⁷⁹ And it has even reached so far as to cover anything that “remind[s] the public of “a celebrity,”⁸⁰ as a robot in front of the game board from the Wheel of Fortune game show reminded the public of Vanna White.⁸¹

Second, the duration of the right has lengthened. Until recently, in most states that recognized the right of publicity, the right did not survive a celebrity’s death.⁸² In many jurisdictions, however, recent legislation has lengthened the right, which now extends beyond death by fifty years,⁸³ seventy years,⁸⁴ or one hundred years,⁸⁵ or even indefinitely.⁸⁶

The right of publicity thus joins copyright, patent, and trademark law in the gallery of exhibits demonstrating the rapid movement toward unlimited scope and duration in IP that represents the propertization of the field.

* * *

Although, through propertization, IP has lost sight of many of its finite objectives, at its inception it assumedly had a rationale that justified its costs. The next Part examines the traditional justifications for IP (as well as for property) and analyzes the accuracy of these rationales and the dangers of protection.

F.3d 912, 920 (3d Cir. 1994) (“[An] actor [may] obtain . . . an interest [in his screen persona] which gives him standing to prevent mere interlopers from using it without authority.”).

79. See *Motschenbacher v. R.J. Reynolds Tobacco Co.*, 498 F.2d 821, 827 (9th Cir. 1974) (allowing a racecar driver’s publicity claim when an advertisement featured a photograph of a car with markings similar to that of the plaintiff’s car, which “caused some persons to think the car in question was [the] plaintiff’s and to infer that the person driving the car was the plaintiff”).

80. *White v. Samsung Elecs. of Am., Inc.*, 989 F.2d 1512, 1514 (9th Cir. 1993) (Kozinski, J., dissenting from denial of rehearing en banc).

81. *White v. Samsung Elecs. of Am., Inc.*, 971 F.2d 1395, 1399 (9th Cir. 1992).

82. Until the 1980s, Utah, Virginia, and Oklahoma were the only states (of the states that recognize a right of publicity) that recognized a right that survived death. Rick Kurnit, *Intellectual Property and Marketing*, in *PRODUCT DISTRIBUTION AND MARKETING* 607, 642–43 (2004).

83. 765 ILL. COMP. STAT. 1075/30 (2001); KY. REV. STAT. ANN. § 391.170 (Banks-Baldwin 2003); NEV. REV. STAT. ANN. 598.984(i) (Michie 1999); TEX. PROP. CODE ANN. § 26.012(d) (Vernon 2000).

84. CAL. CIV. CODE § 3344.1(g) (West Supp. 2004).

85. IND. CODE § 32-36-1-8 (2002); OKLA. STAT. ANN. tit. 12, § 1448(G) (West 1993).

86. See NEB. REV. STAT. §§ 20-202, 20-208 (1999) (allowing an unlimited right of action after a subject’s death for violations of the right of publicity); cf. TENN. CODE ANN. § 47-25-1104 (2001) (providing that, if the right is used within ten years of a subject’s death, it applies indefinitely until two years of nonuse).

II. INTELLECTUAL PROPERTY AND PROPERTY: OF QUESTIONABLE NECESSITY AND UNQUESTIONABLE DANGERS

The traditional stories underlying IP and property are powerful. At the center of the rhetoric and imagery are images of landowners defending their land against trespassers⁸⁷ and of lone inventors plugging away in their basements to obtain the reward of exclusion. These stories undergird the defense of exclusionary rights in popular discourse and in the work of courts and Congress. But are they true? And does the right of exclusion at their heart have dangerous consequences? These inquiries are the focus of this Part.

Even if the traditional stories were accurate and property rights did not threaten significant adverse consequences, exceptions might be necessary to serve important policies not related to providing incentives. But there is even more reason to recognize property rights exceptions to the degree that (1) the traditional stories are not accurate because exclusion is not necessary to foster development and (2) protection leads to substantial dangers. This Part concludes that, in many settings, the traditional stories do not hold and IP protection carries dangers, strengthening the case for providing exceptions to IP rights.

A. Property

1. *The Traditional Story: An Exegesis.* Commentators have justified property law on several grounds, including, most importantly, utilitarianism, the labor theory, and the personhood theory.⁸⁸ For each, the discipline plays an important role in attaining the objective. For example, granting to landowners the right to

87. Private property has a “powerful libertarian appeal,” providing a sanctuary in which “the individual has ultimate control, free from any intrusion except by those that she invites, and in which she is free to express herself exactly as she wishes.” Carol M. Rose, *Left Brain, Right Brain and History in the New Law and Economics of Property*, 79 OR. L. REV. 479, 484 (2000); see also Carter, *supra* note 16, at 717 (citing an “individualistic, almost libertarian, vision” as motivating the dominant paradigm for conversing about property rights).

88. These three rationales implicate additional approaches such as natural rights (labor) and liberty, identity, and privacy (personhood). See JOHN LOCKE, *Second Treatise of Government*, in TWO TREATISES OF GOVERNMENT para. 27, at 305–06 (Peter Laslett ed., 2d ed. Cambridge Univ. Press 1967) (1690) (proffering a natural rights explanation for property rights based upon the labor necessary to produce or cultivate the object claimed); F. Gregory Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1, 48 (2004) (linking property rights with human rights under a personhood theory).

appropriate their labor⁸⁹ and recognizing an interest in land that they consider part of their personalities⁹⁰ promotes the development of land. This Section analyzes the theory that has garnered the most attention and empirical evidence: utilitarianism.⁹¹ Readers skeptical of the importance of utilitarianism may substitute other theories when analyzing the success of property protection in attaining its various objectives. The important point is that, even though property protection plays a significant role in the realization of various theories, it nonetheless has been subject to a variety of limits, as discussed in Part IV.

Property law has long been viewed as serving two main utilitarian purposes: providing incentives for development and preventing the depletion of finite resources.⁹² The two rationales overlap, of course, in internalizing the effects of owners' activity. The first rationale involves providing incentives so that people can appropriate the results of their labor.⁹³ The right to exclude helps create such an incentive by ensuring that "free riders" cannot enjoy the fruits of laborers' work.⁹⁴ Similarly, property creates incentives for development by identifying those who have claims to particular resources and thereby ensuring that they can appropriate the fruits of their efforts to cultivate these resources.⁹⁵

89. The labor theory is associated with John Locke, who famously stated that "every man has a property in his own person" and thus is entitled to whatever he "removes out of the state [of] nature" and "mixe[s] his labour with." LOCKE, *supra* note 88, para. 27, at 305–06 (emphasis omitted).

90. Georg Hegel is typically associated with treating property as "an extension of personality." Thomas C. Grey, *The Disintegration of Property*, 22 NOMOS 69, 74 (1980). For a discussion of how adverse possession, for example, reflects the personhood and labor theories, see *infra* note 224 and accompanying text.

91. See Lastowka & Hunter, *supra* note 88, at 44 (explaining that utilitarianism is "the dominant justification for the creation of private property" and noting that the literature on granting interests in property "is replete with utilitarian accounts").

92. Professor Landes and Judge Posner consider the rationales in a temporal paradigm, linking the prevention of overuse with a static perspective, and the providing of incentives with a dynamic perspective. Landes & Posner, *supra* note 51, at 266.

93. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 32 (6th ed. 2003); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 711 (1986). *But see* Duncan Kennedy & Frank Michelman, *Are Property and Contract Efficient?*, 8 HOFSTRA L. REV. 711, 714 (1980) (questioning the incentives justification).

94. See POSNER, *supra* note 93, at 32 (illustrating by parable the effects of free riders on incentives to production).

95. See Carol M. Rose, *Economic Claims and the Challenges of New Property*, in PROPERTY IN QUESTION 275, 276–77 (Katherine Verdery & Caroline Humphrey eds., 2004)

The second rationale, related to scarcity, typically arises in discussions of the “tragedy of the commons.”⁹⁶ The idea that resources held in common will tragically be depleted by overuse bears a long pedigree,⁹⁷ receiving its most famous elaboration from Professor Garrett Hardin. Hardin’s story centers on a pasture open to

(explaining that, “because property rights identify the person in control of any given thing, they assure the person that he or she can take the fruits of his or her efforts”); see also Katherine K. Baker, *Property Rules Meet Feminist Needs: Respecting Autonomy by Valuing Connection*, 59 OHIO ST. L.J. 1523, 1578–79 (1998) (applying a version of the identifying function in establishing the hierarchy of family members’ claims to children).

Identification also reduces conflict and fosters trade, which, in turn, contributes to specialization, increased productivity, and more and higher-quality goods. See ADAM SMITH, *THE WEALTH OF NATIONS* 3–13 (Edwin Canaan ed., Random House 2000) (1776) (explaining that the increased productivity stems from increased “dexterity” in workers, time savings, and the invention of machines facilitating labor); Carol M. Rose, *Property and Expropriation: Themes and Variations in American Law*, 2000 UTAH L. REV. 1, 2 (“[T]rade permits specialization, and all other things being equal, specialized labor produces higher quantities and qualities of goods.”).

96. As scholars have pointed out, the dichotomy between open-access commons and private property is exaggerated and ignores possibilities such as limited commons properties, the liberal commons, and semicommons property. See, e.g., Hanoch Dagan & Michael A. Heller, *The Liberal Commons*, 110 YALE L.J. 549, 552 (2001) (“[T]he polarizing vocabulary of the ‘tragedy of the commons’ debate . . . unintentionally freezes legal imagination and innovation.”); Michael Heller, *The Dynamic Analytics of Property Law*, 2 THEORETICAL INQUIRIES L. 79, 80 (2001) (arguing that the division of property forms into three static categories—private, commons, and state—imposes analytic costs by “render[ing] new forms of property invisible”); Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 132 (1998) (“Our legal system has hitherto been oddly oblivious to many forms of limited common property . . .”); Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131, 168 (2000) (“The model of semicommon property rights draws attention both to the special strategic problems where common and private property intersect and to the range of sometimes counterintuitive solutions to these problems.”). Another distinction often glossed over is between open-access resources (which are subject to overuse) and common property (which is not). GLENN G. STEVENSON, *COMMON PROPERTY ECONOMICS: A GENERAL THEORY AND LAND USE APPLICATIONS* 3 (1991). In general, the existence and success of options other than pure privatization lessens the necessity of the right to exclude.

97. For examples, see ARISTOTLE, *THE POLITICS AND THE CONSTITUTION OF ATHENS* 33 (Stephen Everson ed. & Jonathan Barnes trans., Cambridge Univ. Press 1996); JANE HALDIMAND MARCET, *CONVERSATIONS ON POLITICAL ECONOMY* 60–61 (3d ed. 1819), excerpted in WILLIAM J. BAUMOL & WALLACE E. OATES, *THE THEORY OF ENVIRONMENTAL POLICY* 28 n.23 (2d ed. 1988); Steven N.S. Cheung, *The Structure of a Contract and the Theory of a Non-Exclusive Resource*, 13 J.L. & ECON. 49, 49–50 (1970); H. Scott Gordon, *The Economic Theory of a Common-Property Resource: The Fishery*, 62 J. POL. ECON. 124, 124 (1954); William Forster Lloyd, *On the Checks to Population* (1833), reprinted in *MANAGING THE COMMONS* 8, 8–9 (Garrett Hardin & John Baden eds., 1977); Anthony D. Scott, *The Fishery: The Objectives of Sole Ownership*, 63 J. POL. ECON. 116, 117–19 (1955); Jens Warming, *Om “grundrente” af fiskegrunde*, 49 NATIONALØKONOMISK TIDSSKRIFT 499 (1911), translated in Peder Andersen, “On Rent of Fishing Grounds”: A Translation of Jens Warming’s 1911 Article, with an Introduction, 15 HIST. POL. ECON. 391, 393 (1983).

all, upon which herdsmen let their cattle graze.⁹⁸ Herdsmen have an incentive to put as many cattle as possible on the commons because they are able to appropriate the entire gain from the cattle that they add but suffer only a fraction of the loss from overgrazing. The herdsmen therefore add continually more cattle to the commons, leading to the “‘destination’ of ruin.”⁹⁹

Professor Hardin’s recounting of the tragedy of the commons naturally has inspired a search for solutions, the most popular of which is privatization.¹⁰⁰ Professor Harold Demsetz provides the most famous exposition, explaining that the right to exclude creates incentives for efficiently utilizing resources, and that it internalizes many of the costs of communal ownership, such as transaction costs.¹⁰¹ Others have remarked upon the role of privatization in reducing enforcement and monitoring costs.¹⁰²

2. *A Critical Look at Property’s Traditional Story.* To evaluate the necessity and costs of the right to exclude, one must critically examine the traditional story.¹⁰³ The more the right to exclude is necessary, the less willing the legal system should be to limit that right. On the other hand, if the right to exclude is *not* necessary, then it may be more acceptable to encroach upon the right when necessary to promote other policies. How does the traditional property story stand up to evidence from the real world? Property seems to stand on more solid ground in providing incentives for development than in preventing resource depletion.

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

99. *Id.*

100. Other solutions include a “Leviathan” or government that determines the use of the commons. See WILLIAM OPHULS & A. STEPHEN BOYAN, JR., *ECOLOGY AND THE POLITICS OF SCARCITY REVISITED* 189 (1992) (recalling Thomas Hobbes’s suggestion that a civil authority regulating scarce resources is an antidote to the “anarchic ‘state of nature’”).

101. Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 356 (1967); see Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. 453, 453–56, 467–78 (2002) (refining Professor Demsetz’s thesis to incorporate strategies of governance in addition to exclusion).

102. Cheung, *supra* note 97, at 52–53; Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1327 (1993).

Even when the benefits outweigh the costs, however, property regimes might not be established because of political considerations, information asymmetries, and heterogeneous and numerous interest groups. See GARY D. LIBECAP, *CONTRACTING FOR PROPERTY RIGHTS* 28 (1989) (“An examination of the political contracting underlying ownership institutions is necessary to understand how property rights are established and modified . . .”).

103. Rights to transfer and use also are important in property law, but I focus on the right to exclude because of its centrality to the traditional story of property law. See *infra* note 219.

The institution of private property, embedded as it is in American society (and as it has been from the start), has constituted the core of landownership and development in this country. Even though but-for causation is difficult to trace precisely, the right to exclude has accompanied the robust development of land. The right also has ameliorated the dangers of free riding and has offered a predictable foundation for society and the economy.¹⁰⁴

The scarcity axis provides more empirical, albeit mixed, evidence of the effect of the right to exclude (or, more generally, the effect of the privatization of property). Privatization has appeared to be successful in helping to prevent a tragedy of the commons in the context of a Maine lobster fishery, oyster industries in Maryland and Virginia, and a British Columbia halibut fishery.¹⁰⁵

Despite this evidence that exclusion can solve potential commons tragedies, more often exclusion is not necessary (at least to the extent posited by the traditional story). This lack of necessity comes in three shapes. First, many commons are made up of resources to which the right to exclude cannot easily be applied. For example, it is impossible

104. For examples of studies supporting the importance of exclusionary rights, see Terry L. Anderson & P.J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163, 165–78 (1975), analyzing land, livestock, and water in the Great Plains; and Ellickson, *supra* note 102, at 1335–41, examining pioneer settlements in Jamestown, Plymouth, and Salt Lake City. See also Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 YALE L.J. 601, 607 n.24 (1998) (citing sources showing that the introduction of private farming in China and Cuba led to greater agricultural productivity); cf. Dean Lueck, *The Rule of First Possession and the Design of the Law*, 38 J.L. & ECON. 393, 395 (1995) (examining the importance of rules of first possession and the law's reduction of rent dissipation that could result from first possession).

105. Richard J. Agnello & Lawrence P. Donnelley, *Property Rights and Efficiency in the Oyster Industry*, 18 J.L. & ECON. 521, 522 (1975) (oyster industry); R. Quentin Grafton & Dale Squires, *Private Property and Economic Efficiency: A Study of a Common-Pool Resource*, 43 J.L. & ECON. 679, 709 (2000) (halibut fishery); James A. Wilson, *A Test of the Tragedy of the Commons*, in *MANAGING THE COMMONS*, *supra* note 97, at 96, 96–97 (lobster fishery). The success of privatization in reducing overuse has also been supported by simulations. See Robert C. Cass & Julian J. Edney, *The Commons Dilemma: A Simulation Testing the Effects of Resource Visibility and Territorial Division*, 6 HUM. ECOLOGY 371, 382 (1978) (finding that “near optimum harvesting” resulted from the combination of individual territories and resource visibility); Diane K. Martichuski & Paul A. Bell, *Reward, Punishment, Privatization, and Moral Suasion in a Commons Dilemma*, 21 J. APPLIED SOC. PSYCHOL. 1356, 1365 (1991) (discussing how privatization eliminated mistrust among the participants and was the most effective tool in preserving the commons and maximizing the total harvest); David M. Messick & Carol L. McClelland, *Social Traps and Temporal Traps*, 9 PERSONALITY & SOC. PSYCHOL. BULL. 105, 109 (1983) (finding that overharvesting resulted from “social traps” accompanying resources held in commons). Finally, further evidence of the benefits of privatization is provided by use rights such as tradeable environmental allowance (TEA) systems and individual transferable quotas (ITQs).

to demarcate air, water, and animal stocks clearly or to carve them into finite bundles. Second, and relatedly, certain commons are inherently prone to tragedy, such that neither exclusion nor any other regime can prevent a tragic outcome. Difficulties such as “framing,” the “halo effect,” and the “intertemporal tradeoff” often prevent rational solutions.¹⁰⁶ Third, many commons problems have been solved under regimes in which exclusion does not play the predominant role.¹⁰⁷ For example, some small close-knit communities have developed norms that help govern the use of scarce resources,¹⁰⁸ and others have developed internal rules to govern the management of resources held in common.¹⁰⁹

3. *The Dangers of Exclusionary Rights in Property.* Many of the drawbacks of exclusionary rights in property law have been avoided by the widespread use of defenses to property rights. Eminent domain precludes individual landowners from holding out and preventing the government from utilizing land that it needs to effectuate certain public policies. Easements allow landlocked owners to leave their land and access public roads. Courts refuse to enforce racial covenants. Adverse possession allows developers of land to reap the rewards of their productivity at the expense of those who let land lie idle. Rules prohibiting restraints on alienation encourage the

106. See Barton H. Thompson, Jr., *Tragically Difficult: The Obstacles to Governing the Commons*, 30 ENVTL. L. 241, 256–62 (2000) (explaining that (1) framing leads actors to view changes to the status quo as losses rather than potential gains, “which encourages them to accept a high degree of risk to avoid the current loss”; (2) scientific and social uncertainty allows for wishful thinking and the “halo effect”—by which participants “assume[] that they are more cooperative than they really are”; and (3) the intertemporal tradeoff results in actors’ “extravagantly discount[ing] the future consequences of . . . current actions” and failing to make any present sacrifice to avoid uncertain future losses).

107. Professor Carol Rose refers to these regimes as limited commons properties (LCPs)—“property held as a commons among the members of a group, but vis-à-vis the outside world.” Rose, *supra* note 96, at 132. For a discussion of how exclusion and governance strategies can be used together, see generally Smith, *supra* note 101.

108. Professor Robert Ellickson famously traced these rituals in the cattle industry in Shasta County, California, uncovering norms that held livestock owners responsible for their animals’ actions and that trumped formal laws. ROBERT C. ELICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 52–64 (1991); see also Ellickson, *supra* note 102, at 1320 (“[L]and rules within a close-knit group evolve so as to minimize its members’ costs.” (emphasis omitted)).

109. The leading scholar investigating such communities, Professor Elinor Ostrom, has offered a number of examples, including the Alanya fishery, the Törbel mountain village, several Japanese villages, and Huerta irrigation institutions. See ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 18–21, 61–82 (1990).

transferability of property. Zoning laws prevent egregiously incompatible uses of land.¹¹⁰ I discuss these and other examples below in Part III, showing how courts and legislatures have incorporated numerous limits on property rights to promote development or for reasons of necessity or equity; such limits mollify some of the potential dangers of property rights.

Nonetheless, several dangers underlie property law. One danger is that privatizing property can create and magnify inequalities in wealth between owners and nonowners. This inequality is significant and, in recent years, has appeared to be growing.¹¹¹ The second danger of property rights is a concept sometimes called “the tragedy of the anticommons.”¹¹² Professor Michael Heller defines the anticommons as “a property regime in which multiple owners hold effective rights of exclusion in a scarce resource,”¹¹³ citing examples such as the storefronts of Moscow, where having a large number of owners exercise rights to exclude fostered underuse of traditional store space and extensive use of metal kiosks in front of stores.¹¹⁴ Nevertheless, although inequities and anticommons are real concerns, the incorporation of limits into property law has prevented many dangerous consequences.

B. Intellectual Property

1. *The Traditional Story: An Exegesis.* As is the case with property, commentators have advanced several rationales for IP. The

110. For a detailed discussion of these concepts, see *infra* Part III.

111. See, e.g., Elliott M. Abramson, *Ruskin's Insights for the Law: A Humanist's Intimations to Technique*, 43 U. PITT. L. REV. 403, 435 (1982) (discussing “the ever-widening gap being created between the ‘haves’ and the ‘have-nots’ by a system which cultivated and protected unlimited acquisition of private property”); Florence Wagman Roisman, *Teaching About Inequality, Race, and Property*, 46 ST. LOUIS U. L.J. 665, 665–66 & n.4 (2002) (noting the widening gap in property distribution in the United States).

112. Professor Frank Michelman introduced the concept, Frank I. Michelman, *Ethics, Economics, and the Law of Property*, 24 NOMOS 3, 6 (1982), and Professor Michael Heller developed it and brought it into public consciousness, Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).

113. Heller, *supra* note 112, at 668. Professor Henry Smith reveals another potential danger of the right to exclude in a “semicommons,” in which land is used as a commons for one purpose but used exclusively for other purposes. Smith, *supra* note 96, at 131–32.

114. Heller, *supra* note 112, at 633–37; see also, e.g., *id.* at 679–87 (discussing the poor performance of privatized state enterprises, the “Big Inch Giveaway” of 1955, the rebuilding of Japan after the 1994 Kobe earthquake, and the allotment of land by the U.S. government to Native Americans in the late nineteenth century).

“moral rights” approach protects authors’ rights to the integrity, attribution, and disclosure¹¹⁵ of their works; the related “natural rights” justification provides that individuals are entitled to the fruits of their labor;¹¹⁶ and the “personhood” perspective asserts that individuals need property rights to control resources in their external environment.¹¹⁷ The utilitarian justification of providing incentives to innovate, however, is the predominant justification for IP, one that is consistent with the Constitution, that the courts have recognized, and that the academic literature has tested.¹¹⁸ For this reason, this Section critiques IP’s traditional utilitarian story.¹¹⁹

Given the nature of inventions and creative works as “public goods,” the incentive theory appears at least as necessary for IP as it is for property. As a public good, information is nonexclusive and nonrivalrous. Nonexclusivity prevents owners from excluding others from the possession of information (in contrast to tangible property, for which physical restraints often are sufficient). Nonrivalrousness magnifies this danger because one person’s consumption does not diminish the amount of the good for others to consume—that is, multiple persons can use information without depleting it.¹²⁰

As a result of these conditions, free riders who have not incurred the costs of creation are tempted to imitate inventions after others have developed them. Allowing such imitation obviously would deter

115. Roberta Rosenthal Kwall, *Preserving Personality and Reputational Interests of Constructed Personas Through Moral Rights: A Blueprint for the Twenty-First Century*, 2001 U. ILL. L. REV. 151, 152–53 (providing background on moral rights).

116. LOCKE, *supra* note 88, para. 27, at 306; see Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1549–64 (1993) (applying Lockean theory to IP).

117. GEORG HEGEL, *HEGEL’S PHILOSOPHY OF RIGHT* 37–46 (T.M. Knox trans., Oxford Univ. Press 6th ed. 1967) (1821); Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 957 (1982).

118. See *infra* note 391.

119. My conclusion in the following Section that IP protection is not fully necessary to effectuate the utilitarian rationale likely would also apply to the other justifications, because IP protection is neither completely necessary nor sufficient to attain their objectives.

120. DONALD S. CHISUM ET AL., *PRINCIPLES OF PATENT LAW* 66–67 (2d ed. 2001); Yochai Benkler, *A Political Economy of the Public Domain: Markets in Information Goods Versus the Marketplace of Ideas*, in *EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY* 267, 270 n.9 (Rochelle Cooper Dreyfuss et al. eds., 2001); Patrick Croskery, *Institutional Utilitarianism and Intellectual Property*, 68 CHL-KENT. L. REV. 631, 631–33 (1993); see Tracy R. Lewis & Dennis A. Yao, *Some Reflections on the Antitrust Treatment of Intellectual Property*, 63 ANTITRUST L.J. 603, 606 (1995) (discussing the difficulties inherent in controlling “the use and dissemination of intellectual property once it is released”).

future innovators and result in a suboptimal level of innovation.¹²¹ To prevent this result, the patent and copyright laws grant inventors a right to exclude.¹²² This right permits them to charge prices in excess of the marginal cost of producing their inventions so that they can not only recover their initial expenditures but also receive profits.¹²³ The right to exclude is designed to increase appropriability and, consequently, the level of innovation in society.

To be clear, the right to exclude in IP law is in some ways¹²⁴ broader than the version appearing in property law. It prevents others from making not only an inventor's product but also certain similar products.¹²⁵ An analogous right to exclude in property law would grant landowners the right to exclude others from not only their land, but also other, similar land. Such a difference in the scope of the right to exclude makes sense: landowners' ability to exclude others from their land allows them to appropriate the rewards of developing their

121. Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 247 (1994).

122. This rationale is not central to the trademark or right of publicity laws. *See infra* notes 169–79 and accompanying text.

123. *See* F.M. SCHERER & DAVID ROSS, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 622 (3d ed. 1990) (demonstrating the utility of governmentally enforced monopoly rights in ensuring an inventor's recovery of sunk development costs and additional profits). Justice (then Professor) Stephen Breyer explains the argument that copyright protection is necessary for books:

Without copyright protection a copying publisher could avoid many of the costs of the original publisher—payment to the author, editing, plate composition, even initial advertising—simply by photographing the printed pages of a published book. If competition then forced book prices down to the copier's cost, the first publisher and the author could not obtain adequate compensation.

....

... The fear [that the initial publisher could not recover his costs] in a world without copyright would, it is claimed, discourage publishers from publishing and authors from writing.

Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 282, 294 (1970) (footnote omitted).

124. In other ways, the right to exclude in IP law is narrower because IP law does not prevent access to the product itself—through, for example, the first sale doctrine and the publication of patents.

125. Patent law provides a right to exclude not only inventions described in the claims of the patent but also those deemed equivalent. *See, e.g., Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 727 (2002) (“[A] patent protects its holder against efforts of copyists to evade liability for infringement by making only insubstantial changes to a patented invention.”). Copyright law protects against not only identical but also “substantially similar” copies. *See, e.g., Steinberg v. Columbia Pictures Indus., Inc.*, 663 F. Supp. 706, 711 (S.D.N.Y. 1987) (noting that a successful copyright infringement action requires substantial similarities between the copy and the protected work).

land, regardless of what other landowners do with their land. By contrast, in the IP context, limiting creators' right to exclude to the precise scope of their inventions would allow free riders to create similar inventions that could reduce demand for the original invention and lessen appropriability. However, despite the broader scope of the right to exclude in IP, the rationale of encouraging development is similar in the two spheres.

2. *A Critical Look at Intellectual Property's Traditional Story.* The traditional story explaining IP is powerful. But is it correct? Although the answer is complex, the connection between IP protection and innovation has never before been as attenuated as it is today. The ever-expanding scope and duration of IP, coming amidst an increase in the magnitude of non-IP incentives, bears continually less justification.

In undertaking this line of inquiry, one caveat is in order. No one knows the optimal shape of IP rights. That is, no one knows what length or breadth of patent or copyright protection would maximize innovation.¹²⁶ Part of this uncertainty stems from the unidirectional course of history—it is impossible to run multiple, simultaneous experiments testing out different shapes of IP as applied to a particular context. Part of the uncertainty is political: Congress, which has proven to be the captive of special interest groups and the architect of rent-seeking legislation, cannot be trusted to discern anything close to an optimal amount of protection.¹²⁷ And part of the uncertainty is the difficulty of reducing innovation to measurable outputs that could be calibrated.

Nonetheless, by exploring the marketplace, it is possible to observe IP's general effectiveness in promoting innovation. Scholars

126. See Breyer, *supra* note 123, at 322 (taking an “ambivalent position” on whether copyright protection is justified and stating that it “rests not upon proven need, but rather upon uncertainty as to what would happen if protection were removed”); George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property: Comment on Cheung*, 8 RES. L. & ECON. 19, 19 (1986) (stating that economic analysis of the patent system is “one of the least productive lines of inquiry in all of economic thought”).

127. See SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM, STUDY NO. 15, at 9–10 (Comm. Print 1958) (authored by Fritz Machlup) [hereinafter Machlup] (noting that the reason for the length of patent terms “is probably more political than economic” and that “many patent attorneys and few economists” have testified before the legislature when it has considered patent terms), *available at* <http://www.mises.org/etexts/patentsystem.pdf>; JESSICA LITMAN, DIGITAL COPYRIGHT 22–34 (2001) (explaining the role of copyright owners in drafting copyright legislation).

can analyze the various competition mechanisms that drive innovation in many industries. Such analysis reveals that in many contexts IP protection does not have a significant effect on innovation, thereby opening the door to exceptions to IP rights. The remainder of this Section questions the traditional stories from the patent, copyright, trademark, and right of publicity angles.

a. Copyright Law. The traditional incentive theory is subject to question in copyright law. Although certain works, such as large-budget motion pictures, might not be created absent copyright protection, many others would. For many works, non-copyright-based incentives such as lead time, network effects, and sales in advance of entering the market are more important catalysts for creation.¹²⁸ At the same time, digitization and Internet-based models of distribution lessen the need for copyright to encourage distribution.¹²⁹

In an important article published in 1970, Justice (then Professor) Stephen Breyer questioned the necessity of copyright in encouraging the creation of books.¹³⁰ He found that publishers' lead-time advantages and threats of retaliation against copiers provided sufficient protection,¹³¹ as did book clubs that contracted to purchase books before publication.¹³² Although Justice Breyer's approach may not apply to all industries today and the effectiveness of the mechanisms that he discussed may not be as potent as he envisioned,¹³³ he nonetheless highlighted non-IP-based incentives that are still applicable today.¹³⁴

128. See *infra* notes 130–42 and accompanying text.

129. See *infra* notes 143–50 and accompanying text.

130. Breyer, *supra* note 123, at 282, 294.

131. *Id.* at 299–302.

132. *Id.* at 302–06. For a discussion of such “presales” in today’s environment, see Mark S. Nadel, *How Current Copyright Law Discourages Creative Output: The Overlooked Impact of Marketing*, 19 BERKELEY TECH. L.J. 785, 824 (2004), discussing the British band Marillion, which “collected an e-mail list of 25,000 fans and successfully solicited them for £200,000 in pre-sale orders for a £16 album in just a few weeks.”

133. For example, there would be significant transaction costs in contracting with publishers, and the book clubs themselves would not fulfill some of the important roles of publishers. See Breyer, *supra* note 123, at 303–04 (recognizing the disadvantages and costs of buyers’ groups); see also Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1372 (1996) (explaining that book clubs are not effective sponsors because, even if they “lower the transaction costs of early sales [of existing books] by bundling buyers together,” they are not a substitute for publishers’ “matchmaking” of author to audience).

134. Lead time advantages are still relevant in, for example, the publishing industry. Nadel, *supra* note 132, at 833–34.

Nor are such incentives limited to those that Justice Breyer raised. Other means by which copyright holders can recover their investments in creating works include (1) price discrimination facilitated by contract law (by which a seller charges buyers different prices not traceable to differences in the cost of supplying the work);¹³⁵ (2) charges for access to updated and linked content;¹³⁶ (3) self-help technologies such as digital rights management;¹³⁷ (4) advertising;¹³⁸ (5) government payments;¹³⁹ (6) social norms such as tipping;¹⁴⁰ and (7) nonmonetary inducements such as enjoyment, pleasing audiences, desire for fame or prestige, and moral or personal goals.¹⁴¹ Further questioning the need for copyright, many forms of creative expression—such as fashions, new words and slogans, jokes

135. See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1454–55 (7th Cir. 1996) (finding that copyright law did not preempt a contractual price discrimination scheme). See generally Michael J. Meurer, *Copyright Law and Price Discrimination*, 23 CARDOZO L. REV. 55 (2001) (discussing the various methods of price discrimination and whether they are socially desirable).

136. Nadel, *supra* note 132, at 828–29 (discussing publishers’ transformation of the business from providing a product to providing a service).

137. Digital rights management (DRM) systems operate through technological means such as encryption or watermarking and “serve as a virtual lock to restrict access to and uses of digital content.” Philip J. Weiser, *The Internet, Innovation, and Intellectual Property Policy*, 103 COLUM. L. REV. 534, 563 n.112 (2003); see also Nadel, *supra* note 132, at 835–37 (discussing the use of DRM systems to “limit how many files a subscriber may download or how long a copy remains usable”).

138. See Nadel, *supra* note 132, at 829–31 (noting that publishers finance creative content “by selling advertising, including display ads in newspapers and magazines, television commercials and product placements within television shows and movies”).

139. See *id.* at 845–47 (discussing purchases by public museums, schools, and libraries).

140. See *id.* at 837–45 (suggesting that publishers “encourage a stronger social custom of tipping, donating to, or otherwise supporting valued content creators”).

141. See CLAUDE SAMUEL, PROKOFIEV 119 (1971) (noting that Sergei Prokofiev was motivated by “the joy of creation”); MARTHA WOODMANSEE, THE AUTHOR, ART AND THE MARKET 159 n.19 (1994) (depicting Martin Luther’s description of his writing: “Freely have I received, freely given, and I want nothing in return”); Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354, 378 (1999) (explaining that commercial producers are likely “to guess what sort of information content consumers prefer, and then attempt to produce it”); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 331 (1989) (stating the benefit of prestige gained from publication). See generally LANDES & POSNER, *supra* note 41, at 41–50 (advancing nine factors that reduce the need for copyright); Wendy J. Gordon, *Render Copyright unto Caesar: On Taking Incentives Seriously*, 71 U. CHI. L. REV. 75, 75–76 (2004) (advancing a “gift theory” of creation); Nadel, *supra* note 132, at 811–12 (citing these and other examples).

and magic tricks, and the food industry—have flourished in the absence of protection.¹⁴²

The increasing digitization of creative works and rise of the Internet together play a significant role in reducing the need for copyright to provide incentives to distribute works. Content distributors—who are central targets of copyright because they “are in the business of distribution and cannot ignore financial considerations”¹⁴³—traditionally have undertaken substantial investments, such as manufacturing, printing, packaging, and distribution investments, in becoming distributors.¹⁴⁴ One estimate revealed that the variable costs for manufacturing and distributing a single music CD in Germany in 1998 were more than \$1.3 million.¹⁴⁵

The Internet significantly reduces such costs. The fixed costs in cyberspace are minimal, and the marginal cost of reproducing and distributing digital copies is zero.¹⁴⁶ The combination of low costs and the ease of distribution through online technologies allows content to

142. Tom G. Palmer, *Intellectual Property: A Non-Posnerian Law and Economics Approach*, 12 *HAMLIN L. REV.* 261, 287 (1989); see Nadel, *supra* note 132, at 791 (providing examples of industries that function in the absence of copyright protection); see also LITMAN, *supra* note 127, at 105–06 (stating that the food industry has prospered in the absence of copyright protection despite concerns that intellectual creation would be deterred); Malla Pollack, Note, *Intellectual Property Protection for the Creative Chef, or How to Copyright a Cake: A Modest Proposal*, 12 *CARDOZO L. REV.* 1477, 1481 (1991) (highlighting the lack of copyright protection for “recipes [and] food prepared from recipes”). Even performers in the music industry make most of their income not from the sale and distribution of music but from live performances and the publicity that accompanies distribution (although the popularity of their albums is due in part to promotion by the record labels). Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 *U. CHI. L. REV.* 263, 308, 311 (2002).

Professor Robert Merges has traced two examples of innovation that have occurred in the absence of IP protection. First, he points to the Fashion Originators’ Guild of America, composed of fifteen manufacturers of women’s dresses, whose members registered their designs with the group and agreed not to copy other members’ designs. Merges, *supra* note 133, at 1363–66. The second example is the “Script Registry” created by the Writers Guild of America, West (WGA) that allows writers to register their scripts and thereby reduces the likelihood of misappropriation. *Id.* at 1366–68. Although Professor Merges cautions against “overeager extrapolation” from these examples, *id.* at 1371, they demonstrate additional support for nonproprietary systems.

143. Ku, *supra* note 142, at 295.

144. *Id.* at 294–96.

145. *Id.* at 295 n.222.

146. *Id.* at 300; see Jane C. Ginsburg, *Copyright and Control over New Technologies of Dissemination*, 101 *COLUM. L. REV.* 1613, 1646 (2001) (explaining that, through digital media, authors have begun to perform tasks traditionally undertaken by publishers).

“spread[] over the Internet like an unstoppable viral outbreak.”¹⁴⁷ Of course, such widespread distribution of perfect copies could threaten the ability of copyright holders to recover their costs.¹⁴⁸ But at least the Internet reduces the need for incentives to distribute works: the public internalizes distribution and copying costs by buying the components needed to connect to the Internet.¹⁴⁹ The lessened need for distribution incentives, together with the presence of non-copyright-based incentives, frequently calls into question the case for copyright, at least in its currently bloated form.¹⁵⁰

b. Patent Law. The traditional incentive theory also fails to explain much patenting today. Firms seek patents for many reasons,¹⁵¹ but appropriating returns from their innovations is typically not central to their calculations. The nature of innovation differs among industries,¹⁵² and the major studies undertaken in the last half-century have been consistent in showing that patents are the primary appropriability mechanism in, at most, only a few industries¹⁵³—

147. Ku, *supra* note 142, at 300 (adopting an epidemic analogy from *Reimerdes v. Universal City Studios, Inc.*, 111 F. Supp. 2d 294, 332 (S.D.N.Y. 2000)).

148. This danger is reduced through DRM. See Ku, *supra* note 142, at 264 (“[W]hen combined with legal sanctions, digital technology also makes it possible to control information to an unprecedented degree.”).

149. *Id.* at 301. The components include a computer, access to the Internet, storage media, and electricity. *Id.*

Even costs besides distribution that distributors traditionally have assumed, such as marketing, can be lowered on the Internet. Peer-to-peer technology is viewed as a “‘high-tech version’ of word of mouth.” *Id.* at 315 (citation omitted); see also *id.* at 316 (noting that, with the exception of twenty-five vinyl copies, the rock band the Smashing Pumpkins released an album exclusively in MP3 format, and that news of the release spread quickly through message boards on fan sites).

150. But see, e.g., William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471 (2003) (suggesting a system of indefinite renewals for copyrighted works); Panel Discussion, *The Constitutionality of Copyright Term Extension: How Long is Too Long?*, 18 CARDOZO ARTS & ENT. L.J. 651, 690–95 (2000) (statement of Arthur Miller) (advancing arguments in favor of the Copyright Term Extension Act, including the attraction of capital by providing a rate of return and the provision of incentives to preserve works at risk of destruction).

151. See *infra* note 168.

152. See Richard C. Levin et al., *Appropriating the Returns from Industrial Research and Development*, 1987 BROOKINGS PAPERS ON ECON. ACTIVITY 783, 816 (noting interindustry variation in appropriability mechanisms).

153. See generally COHEN ET AL., *supra* note 48, at 9; F.M. SCHERER ET AL., PATENTS AND THE CORPORATION 130–35 (2d ed. 1959); C.T. TAYLOR & Z.A. SILBERSTON, THE ECONOMIC IMPACT OF THE PATENT SYSTEM: A STUDY OF THE BRITISH EXPERIENCE 201–07 (1973); Levin et al., *supra* note 152, at 802, 809; Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MGMT. SCI. 173, 174 (1986). Other literature supports this conclusion. See FED. TRADE

typically pharmaceuticals and biotechnology,¹⁵⁴ and sometimes chemicals, medical products, and agricultural products. Although patents may play a secondary role in providing incentives for innovation in certain cases, they do not play the primary role that the traditional theory posits.¹⁵⁵

COMM'N, ANTICIPATING THE 21ST CENTURY: COMPETITION POLICY IN THE NEW HIGH-TECH, GLOBAL MARKETPLACE, at 8-6 (1996) [hereinafter FTC GLOBAL COMPETITION REPORT] (discussing the use of patents in the float-glass market); SCHERER & ROSS, *supra* note 123, at 627 (discussing a survey that indicated that “patent protection increased imitation costs by 40 percentage points in pharmaceuticals . . . [and] by 25 points for typical chemical products”); W. KIP VISCUSI ET AL., *ECONOMICS OF REGULATION AND ANTITRUST* 831 (2d ed. 1995) (noting that patents generally are more important in pharmaceuticals and chemicals than in other industries).

154. The pharmaceuticals and (particularly for downstream elements) biotechnology industries are distinguished by the significant costs of creation. Firms in the biopharmaceutical industry usually spend hundreds of millions of dollars and take ten to fifteen years to bring new drugs to the market. See PHARM. RESEARCH & MFRS. OF AM. (PHARMA), PHARMACEUTICAL INDUSTRY PROFILE 2004, at 2 (2004) (providing estimates of ten to fifteen years and more than \$800 million), available at <http://www.phrma.org/publications/publications/2004-03-31.937.pdf>; PUB. CITIZEN, RX R&D MYTHS: THE CASE AGAINST THE DRUG INDUSTRY'S R&D “SCARE CARD” 7 (2001) (estimating the cost of development at between \$114 million and \$150 million), available at <http://www.citizen.org/documents/acfdc.pdf>; TUFTS CTR. FOR THE STUDY OF DRUG DEV., OUTLOOK 2002, at 1 (stating that the cost of developing new drugs and bringing them to the market averages (including opportunity costs) \$802 million and takes ten to fifteen years), available at <http://csdd.tufts.edu/InfoServices/OutlookPDFs/Outlook2002.pdf>. These companies must pass through multiple stages of innovation, such as discovering the relevant molecules with therapeutic effects, undertaking thorough clinical testing, undergoing significant Food and Drug Administration (FDA) review, and developing, manufacturing, and marketing the drug, with only one out of every four thousand discovered compounds ever reaching the marketplace. See TAYLOR & SILBERSTON, *supra* note 153, at 231 (concluding, based on a study of the importance of patents in Great Britain in the 1960s, that “[t]he pharmaceutical industry stands alone in the extent of its involvement with the patent system”); VISCUSI ET AL., *supra* note 153, at 848 (noting that after the completion of the three testing stages, a ninety thousand–page application is filed covering clinical trials of more than three thousand patients, and that the FDA renders its decision after two and a half more years); Alan M. Fisch, *Compulsory Licensing of Pharmaceutical Patents: An Unreasonable Solution to an Unfortunate Problem*, 34 JURIMETRICS J. 295, 302–03 (1994) (noting that “only five of 4000 discovered compounds tested in industry laboratories . . . warrant human testing” and that “[o]f these five, only one completes the rigorous government testing process and becomes approved for sale”); Arti K. Rai, *The Information Revolution Reaches Pharmaceuticals: Balancing Innovation Incentives, Cost, and Access in the Post-Genomics Era*, 2001 U. ILL. L. REV. 173, 181 (noting that prescription drug manufacturers must conduct preclinical testing on animals, file a drug application with the FDA, undertake three stages of clinical/human testing, and undergo final FDA review).

155. See Levin et al., *supra* note 152, at 815–16 (noting that even if patents improve appropriability, they typically are not the “primary barriers that prevent general access to what would otherwise be pure public goods”); see also ASHISH ARORA ET AL., R&D AND THE PATENT PREMIUM 34–35 (Nat'l Bureau of Econ. Research, Working Paper No. 9431, 2003) (concluding that patent protection plays a role in stimulating research and development (R&D) across most manufacturing industries).

For example, patents play a relatively minor role in the creation of products in the industries of semiconductors, office equipment, motor vehicles, rubber products, textiles, primary metals, instruments, food, printing/publishing, steel, and electric components.¹⁵⁶ In these industries, firms do not consider patents effective appropriability mechanisms.¹⁵⁷ The patentable sections of software can be developed without significant costs.¹⁵⁸ And patents are even less necessary for Internet business methods,¹⁵⁹ which are usually simple ideas easily conceived¹⁶⁰ and distributed.¹⁶¹

156. See COHEN ET AL., *supra* note 48, at tbl.1 (listing food, printing/publishing, and steel as industries where patents are generally not needed to promote innovation); JOHN E. TILTON, INTERNATIONAL DIFFUSION OF TECHNOLOGY: THE CASE OF SEMICONDUCTORS 60–61 (1971) (discussing a study indicating that the number of innovations in the top six semiconductor firms “does not appear closely related to the number of patents they have accumulated”). A survey of R&D executives revealed that, within a two-year period, 100 percent of inventions in the office equipment, motor vehicles, rubber products, and textiles industries, and 99 percent in the primary metals and instruments industries, would have been developed even without patent protection. Mansfield, *supra* note 153, at 174–75 & tbl.1.

157. See, e.g., COHEN ET AL., *supra* note 48, at 10 (noting that managers consider secrecy and lead time to be the two most effective appropriability mechanisms); Levin et al., *supra* note 152, at 796 (reporting a survey that demonstrated that managers in only the chemical and petroleum refining industries believed that process patents were important, and that managers in only the chemical and steel mills industries thought that product patents were important in their companies’ R&D); 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) (noting that “in most industries advantages associated with a head start, including establishment of production and distribution facilities, and moving rapidly down a learning curve, were judged significantly more effective than patents in enabling a firm to reap returns from innovation”); F.M. Scherer, *First-Mover Advantages from Pioneering New Markets: Comment*, 9 REV. INDUS. ORG. 173, 175 (1994) (explaining that in most corporations’ R&D decisions, patents played “a minor role” and that “the necessity of maintaining competitive leadership” and “profits resulting from customer belief in the company’s technological leadership” were more critical).

158. See FTC INNOVATION REPORT, *supra* note 44, at 3–45 (describing the ability to develop software without high upfront research costs, clinical trials, or other costs).

159. The PTO classifies business method patents in class 705, which is defined as “data processing: financial, business practice, management, or cost/price determination.” USPTO, U.S. Patent Classification System, Classification Definitions: Class 705 Data Processing, at <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/def/705.htm> (last visited Oct. 16, 2004) (on file with the *Duke Law Journal*); see BRONWYN H. HALL, BUSINESS METHOD PATENTS, INNOVATION, AND POLICY 2–4 (Nat’l Bureau of Econ. Research, Working Paper No. 9717, 2003) (discussing the history of class 705 patents).

160. In fact, many such methods had already been utilized outside the Internet before being patented. See also Dreyfuss, *supra* note 17, at 276–77 (criticizing business method patents, which have “very high” costs and “low” benefits); Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 61, 92–93 (1999) (noting that “substantial anecdotal evidence” demonstrates that competition provides a sufficient incentive to business methods,

Instead, firms in these industries regard market-based incentives as more effective catalysts for innovation.¹⁶² A significant nonpatent incentive to innovate is the advantage from being the first to enter a market—in other words, a “market pioneer.”¹⁶³ Because of customer familiarity and brand loyalty, many market pioneers maintain significant market shares long after they enter the market.¹⁶⁴ In addition, the first company to start down a learning curve may obtain cost advantages, which can be used to recoup development costs quickly and even to block potential competitors from entering the market.¹⁶⁵ Research and development (R&D) executives generally consider “lead time” over competitors one of the most effective appropriability mechanisms.¹⁶⁶

Markets characterized by network effects—in which the value of a network of products or services increases with a higher number of participants—illustrate a particularly powerful version of market-based incentives.¹⁶⁷ The first to enter such markets receives significant rewards, such as at least temporary domination. Consequently, the fierce competition to arrive first and gain the critical mass of consumers to foster success encourages innovation; any incentives that patents provide are less critical.¹⁶⁸ The conclusion that, in many

and offering the examples of “fast food restaurants, self-service gasoline stations, quick oil change facilities, supermarkets for food and office supplies, automatic teller devices and other banking services, electronic fund transfers, supplemental insurance for physician services, and alternatives for long-distance telephone services”).

161. See FTC INNOVATION REPORT, *supra* note 44, at 3-45 (noting that entire Internet product life cycles may pass before patents can be issued).

162. Of course, as mentioned above, even if market-based incentives are more important appropriability mechanisms, patents might still play a role in providing the final increment of appropriability that motivates investors to provide funding for development.

163. William T. Robinson et al., *First-Mover Advantages from Pioneering New Markets: A Survey of Empirical Evidence*, 9 REV. INDUS. ORG. 1, 6 (1994).

164. Customer demands also may contribute to the competition to innovate. See FTC GLOBAL COMPETITION REPORT, *supra* note 153, at 6-16 (quoting testimony of an IBM executive that “unrelenting consumer demands” for computing capability are “fueling the impetus” for “innovation and commercialization of new technologies . . . proceeding at a breakneck pace”). For a more detailed discussion of market pioneers, see Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. PA. L. REV. 761, 821-22 (2002).

165. SCHERER & ROSS, *supra* note 123, at 627. Moreover, competition will not always drive prices so low that earlier development costs cannot be recovered. PHILLIP AREEDA & LOUIS KAPLOW, *ANTITRUST ANALYSIS* 153 (5th ed. 1997).

166. COHEN ET AL., *supra* note 48, at 10.

167. For a more detailed discussion of network effects, see Carrier, *supra* note 164, at 822-23.

168. See Maureen A. O'Rourke, *Toward a Doctrine of Fair Use in Patent Law*, 100 COLUM. L. REV. 1177, 1216 (2000) (stating that, given innovation competition and first-mover

contexts, patents are less critical for innovation than the traditional theory would posit could counsel readjustment of patent scope or the range of patentable subject matter. It also warrants a greater role for defenses to claims of patent infringement.

c. Trademark Law. The “development” to be encouraged in the context of trademark law differs from that in patent and copyright law. To be clear, it is more subtle. Development in patent and copyright law accords with providing incentives to encourage new inventions and creative works.¹⁶⁹ In trademark law, by contrast, there is no need to stimulate the creation of more marks.¹⁷⁰ Rather, the purpose of trademark law is to prevent customer confusion by providing a marketplace infused with optimal source identification—in other words, a marketplace in which consumers can identify the

advantages, “investors may not need the inducement of intellectual property rights at all to encourage them to fund innovation” (emphasis omitted)).

If market-based incentives are so crucial for innovation, and patent protection is so unnecessary, what explains the skyrocketing rate of patent applications? Strategic considerations. Some firms patent to have leverage in negotiations with competitors, to prevent infringement lawsuits, or for other defensive purposes. *See* FTC INNOVATION REPORT, *supra* note 44, at 3-33 (“‘Defensive patenting’ is primarily motivated by a desire to ensure freedom to operate and includes the use of patents as bargaining chips in cross-licensing negotiations.”); COHEN ET AL., *supra* note 48, at 17 (stating that firms seek patents to prevent competitors from patenting related inventions, to strengthen their bargaining position, to prevent infringement lawsuits, and to enhance their reputation); Hall & Ziedonis, *supra* note 48, at 125 (discussing the results of a study indicating that patents are often used as “bargaining chips”). For example, in the semiconductor, computer hardware, and computer software industries, many companies have responded to the likelihood of “unintentional and sometimes unavoidable” patent infringement litigation by filing hundreds of patent applications each year, which they “can use defensively against firms threatening infringement actions.” FTC INNOVATION REPORT, *supra* note 44, at 2-26; *see also id.* at Exec. Summary, at 6-7 (noting that the time and money spent on these patents often comes at the expense of developing new technologies). Other firms use patents as a “signaling device” to consumers, competitors, or investors. Allison et al., *supra* note 49, at 436 & n.6; *see also* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1505-06 (2001) (arguing that patents and patent applications serve as evidence that “the company is well managed, is at a certain stage in development, and has defined and carved out a market niche”); Lemley, *supra* note 50, at 143-44 (noting the use of patents to attract or appease venture capital firms); Long, *supra* note 50, at 627-28 (observing that “firms may choose to obtain and use a portfolio of patent rights to signal information about themselves that would be more expensive to convey through other means”). Other reasons for patenting include product branding, resume value, inertia, and psychological effect. Lemley, *supra*, at 1506; Lemley, *supra* note 50, at 144. Although some of the above reasons could have an effect on appropriability, any such effect typically would be indirect and of secondary importance (and certainly less than the traditional theory posits).

169. *See supra* Parts II.B.2.a-b.

170. MERGES ET AL., *supra* note 13, at 531.

producers of goods.¹⁷¹ Thus, “development” in trademark law signifies the forging of the link between producers and marks.

The goal of forging a link between producers and marks traditionally has occurred by preventing customer confusion. However, to the extent that trademark law has expanded in the past decade to encompass dilution, it has deviated from its development rationale.¹⁷² Granted, some instances of dilution might detract from optimal source identification. For example, producers using the mark “Rolls Royce” to label everything from sneakers to televisions to designer clothing could very well weaken the association in consumers’ minds between the true Rolls Royce manufacturer and its flagship automobile.¹⁷³ Such is the rationale for “dilution by blurring” in its application to truly famous marks that would be weakened by overuse.¹⁷⁴ But dilution as practiced today often bears little resemblance to the core of the concept originally formulated. In dilution’s expansion to cover marks that are not nationally famous,¹⁷⁵ the doctrine in many instances allows producers to protect marks without offering significant benefits for source identification. Because of this transformation, trademark law often is not necessary to promote its development-based objectives.

d. Right of Publicity Law. In the context of the right of publicity, any conceivable notion of development would take the form of providing incentives to invest in celebrity. But even assuming *arguendo* that this is a legitimate objective, there are many related

171. See *supra* notes 51–52 and accompanying text.

172. The Federal Trademark Dilution Act of 1995 (FTDA), 15 U.S.C. § 1125 (2000), provides a cause of action to “[t]he owner of a famous mark” that suffers “dilution of the distinctive quality of the mark.” *Id.* § 1125(c)(1).

173. Walter J. Derenberg, *The Problem of Trademark Dilution and the Antidilution Statutes*, 44 CAL. L. REV. 439, 449 (1956) (explaining that “if you allow Rolls Royce restaurants and Rolls Royce cafeterias, and Rolls Royce pants, and Rolls Royce candy, in 10 years you will not have the Rolls Royce mark any more” (quoting *Hearings Before the House Comm. on Patents*, 72nd Cong. 15 (1932) (statement of Professor Frank I. Schechter))).

174. See Lemley, *Lanham Act*, *supra* note 17, at 1704 (“[D]ilution by blurring . . . can ‘whittle away’ the distinctive value of a famous trademark by giving the same mark several different associations.” (footnote omitted)); see also Dogan, *supra* note 60, at 320 (contending that dilution should focus on preserving the singularity of truly famous marks). The Supreme Court recently provided some limits on dilution by holding that section 1125(c)(1) “unambiguously requires a showing of actual dilution, rather than a likelihood of dilution,” although the Court liberally construed the requirement. *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418, 433 (2003).

175. See *supra* notes 57–60 and accompanying text.

reasons why the right of publicity would not be necessary to achieve this purpose.

First, there are numerous other reasons that motivate celebrities, such as the desire for fame, power, success, or wealth.¹⁷⁶ Second, through the very activities that help create a public persona, it is easy to recoup any costs associated with becoming a celebrity.¹⁷⁷ In contrast, for patented and copyrighted works, only the final product (and not the labor that created it) is the desired output.¹⁷⁸ Finally, only a few “superstars” can capitalize significantly on their public personae, which diminishes the likelihood that people will feel motivated to become celebrities based on the assurance that they will control the appropriation of their public personae.¹⁷⁹ For all of these reasons, the right of publicity is not necessary to promote development.

3. *The Dangers of Exclusionary Rights in Intellectual Property.* The right to exclude in IP law has created three dangers: (1) monopoly loss; (2) innovation bottlenecks; and, relatedly, (3) the impoverishment of the public domain, speech, and democracy.¹⁸⁰

a. *Monopoly Loss.* The right to exclude carves out for patent holders and copyright holders periods in which only they can sell or

176. See *Cardtoons, L.C. v. Major League Baseball Players Ass’n*, 95 F.3d 959, 974 (10th Cir. 1996) (noting that publicity rights offer “inconsequential” inducement for achievement “because most celebrities with valuable commercial identities are already handsomely compensated” and are “able to reap financial reward from authorized appearances and endorsements”); Diane Leenheer Zimmerman, *Fitting Publicity Rights into Intellectual Property and Free Speech Theory: Sam, You Made the Pants Too Long!*, 10 DEPAUL-LCA J. ART. & ENT. L. & POL’Y 283, 306 (2000) (arguing that “[n]ot a shred of empirical data exists to show [that people] would invest less energy and talent in becoming” famous if they knew that they could not capture licensing fees).

177. Rochelle Cooper Dreyfuss, *We Are Symbols and Inhabit Symbols, So Should We Be Paying Rent? Deconstructing the Lanham Act and Rights of Publicity*, 20 COLUM.-VLA J.L. & ARTS 123, 144 (1996); Michael Madow, *Private Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 125, 208–09 (1993); see also *Cardtoons*, 95 F.3d at 973 (“Most sports and entertainment celebrities with commercially valuable identities engage in activities that themselves generate a significant amount of income; the commercial value of their identities is merely a by-product of their performance values.”).

178. Madow, *supra* note 177, at 208–09.

179. *Id.* at 213. It bears mention that many countries do not have a right of publicity but nonetheless have many who aspire to celebrity. Zimmerman, *supra* note 176, at 306.

180. Professor Glynn Lunney highlights an additional danger of increased protection in the form of the opportunity cost of noncreative activities that are foregone because of excess copyright protection. Lunney, *supra* note 26, at 488.

license their products.¹⁸¹ Although in this way the right to exclude may provide incentives by allowing the recovery of expenditures and profits, it may also (to the extent that other products are imperfect substitutes for the protected invention¹⁸²) allow inventors to charge a price significantly above the marginal cost of production.¹⁸³ IP holders thus could reap monopoly profits, effectuating a transfer of resources from consumers.¹⁸⁴

In addition to wealth transfers, another danger of monopoly loss is the “deadweight loss” in consumer and producer surplus. As inventors increase the price of works above their marginal cost, those who would pay more than the marginal cost but less than the monopoly price will not buy the works.¹⁸⁵ Deadweight loss is exacerbated by IP holders’ inability to price discriminate perfectly, which would allow creators to sell works to different buyers for exactly the price at which each buyer values the works.¹⁸⁶

181. To be clear, the patent statute only provides the negative right to exclude, 35 U.S.C. § 154(a)(1) (2000), but a patentee can utilize such a right to prevent others from selling or licensing a product.

182. In many instances, IP protection will not affect the market of product substitutes and will not confer monopoly power. *See, e.g.*, ORG. FOR ECON. CO-OPERATION & DEV., COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS 15 (1989) (reporting that, in a survey of patent licensors, no close substitutes existed for the patented product in only 27 percent of cases, and that there were more than ten competitors in more than 29 percent of cases); Dam, *supra* note 121, at 249–51 (“[L]eading companies may obtain 1,000 or more patents in a single year, and yet many such firms are unlikely ever to obtain even a single monopoly in any market.”); Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1729–38 (2000) (dismissing commentators’ erroneous assertion that IP rights are economic monopolies); *see also* EDWARD HASTINGS CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION: A RE-ORIENTATION OF THE THEORY OF VALUE* 56–70 (8th ed. 1962) (articulating a theory of monopolistic competition based on differentiated products); Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 236–41 (2004) (same).

183. William W. Fisher III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659, 1700–01 (1988).

184. *See id.* at 1701–02 (“[M]oney that would have remained in the pockets of consumers, had the work been priced at the level at which the marginal cost of producing it equaled the demand for it, will now go into the pocket of the copyright or patent holder.”).

185. *Id.* at 1702; *see also* HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* § 2.3(c), at 75 (2d ed. 1999) (noting that exclusive rights lead to deadweight loss because the decline in consumer surplus exceeds the increase in producer surplus).

186. Avishalom Tor & Dotan Oliar, *Incentives to Create Under a “Lifetime-Plus-Years” Copyright Duration: Lessons from a Behavioral Economic Analysis for Eldred v. Ashcroft*, 36 LOY. L.A. L. REV. 437, 448 n.31 (2002). The use of contract law can come closer to achieving price discrimination.

The reduced competition from overly expansive trademark protection is another example

b. *Innovation Bottlenecks.* The right to exclude at the heart of patent law affects not only the product in which a patented part appears but also the multipatented path of innovation. As I explain elsewhere, the patent right threatens to create two types of bottlenecks: (1) an “intragenerational bottleneck” that occurs when one product contains multiple patented components and one of the patent holders refuses to license one of the patented parts, thereby preventing the practice of the invention and (2) an “intergenerational bottleneck” that blocks postpatent innovation in cumulative innovation industries (in which each product generation builds on its predecessor).¹⁸⁷

Intragenerational bottlenecks occur most frequently in the semiconductor industry and have also appeared in the biotechnology, computer software, and Internet industries.¹⁸⁸ In such industries, there frequently arises a “patent thicket,”¹⁸⁹ in which overlapping patent rights enable each patent holder with a patented input in the product to block the use of the product by all others.¹⁹⁰ The power to hold other patent holders hostage is fostered and magnified by the injunctions and costly and lengthy infringement litigation that characterize the patent system.¹⁹¹ The danger inherent in these

of monopoly loss. Although trademark law generally reduces search costs, its prohibition on using others' marks can increase the costs of introducing products and potentially lead to monopoly power by creating differences between otherwise identical products in the eyes of consumers. Lunney, *supra* note 17, at 421. Because trademark owners can prohibit imitation of their marks (even in instances in which the benefit of limiting customer confusion is absent), copying that is essential to a competitive economy is reduced. *See id.* at 482 (“Allowing fact finders to infer infringement from [intentional] imitation will necessarily limit the level of desirable imitation in the economy and reduce the economy’s competitiveness.”). In particular, protecting trademark owners’ control of their marks limits price competition in the market for the trademarked goods. Lemley, *Lanham Act*, *supra* note 17, at 1696; *see also* Lunney, *supra* note 17, at 486 (noting that property-based trademark protection results in market segmentation and indirect competition that is “less effective at imposing price discipline than the direct competition that would exist absent property-based trademark’s legal command”).

187. Michael A. Carrier, *Resolving the Patent-Antitrust Paradox Through Tripartite Innovation*, 56 VAND. L. REV. 1047, 1080–90 (2003).

188. Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 144 (Adam B. Jaffe et al. eds., 2001).

189. *See* Shapiro, *supra* note 188, at 119 (defining “patent thicket” as “an overlapping set of patent rights requiring that those seeking to commercialize new technology obtain licenses from multiple patentees”).

190. Carrier, *supra* note 187, at 1091.

191. *See* 35 U.S.C. § 283 (2000) (“[C]ourts . . . may grant injunctions . . . to prevent the violation of any right secured by patent.”); Carrier, *supra* note 187, at 1090; Shapiro, *supra* note 188, at 144.

mechanisms is exacerbated when patents issue for products already on the market, because the owner of a newly issued patent holds a commanding position over manufacturers already in large-scale production, who cannot easily redesign their products and thus are forced to comply with the new patentee's demands.¹⁹²

By contrast, intergenerational bottlenecks threaten to obstruct future cumulative innovation. Cumulative innovation proceeds in a sequential fashion, with innovators building on each other's discoveries.¹⁹³ This type of innovation occurs in industries as diverse as automobiles, biotechnology, semiconductors, computer hardware, and computer software.¹⁹⁴ Computer software, for example, can be

192. Shapiro, *supra* note 188, at 121, 125. Patent pools and cross-licensing have solved some of the dangers of the intragenerational bottlenecks. For example, in the semiconductor industry, in which hundreds, if not thousands, of patents can read onto a single product, "broad cross licenses are the norm," with many companies licensing most of their patent portfolios to others. *Id.* at 129–30. For more detail on the role of licensing in the semiconductor industry, see generally Hall & Ziedonis, *supra* note 48.

193. See SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES (forthcoming Jan. 2005) (manuscript at 3, on file with the *Duke Law Journal*) ("[B]iotechnology, computer software, and computer hardware. . . have a high degree of 'cumulateness', in the sense that each innovator builds on prior developments and discoveries."); Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. ECON. PERSP. 29, 29 (1991) (noting that cumulative innovation proceeds sequentially, with "innovators . . . inspir[ing] each other"). In contrast, industries marked by discrete invention—such as the toys, consumer goods packaging, and power hand-tools industries—do not proceed as sequentially and are not characterized by patents that are integral components of a larger, continually developing product or system. Carrier, *supra* note 164, at 829 & n.298.

194. Thomas M. Jorde & David J. Teece, *Innovation, Cooperation, and Antitrust*, in ANTITRUST, INNOVATION, AND COMPETITIVENESS, *supra* note 157, at 47, 48–49; see FTC INNOVATION REPORT, *supra* note 44, at 2-25 to 2-26 (noting that "technology developed in industries such as semiconductors, computer hardware, and software can contain a large number of incremental innovations"); Hall & Ziedonis, *supra* note 48, at 102 (discussing this phenomenon in the semiconductor industry); Levin et al., *supra* note 152, at 788 (same).

viewed as “a series of inventions piled on top of each other”¹⁹⁵ and can contain “potentially hundreds of thousands”¹⁹⁶ of patents.

Across the range of industries marked by cumulative innovation, intergenerational bottlenecks can block the path of innovation, as the latest product generation is held hostage to its predecessor. Such bottlenecks are the inevitable consequence of (1) the incremental fashion in which innovation proceeds in certain industries and (2) the patent system, which awards improvement patents to inventions that may be nonobvious to a person skilled in the relevant art but nonetheless cannot be practiced without infringing the earlier patent.¹⁹⁷ Although licensing between an initial and follow-on innovator sometimes solves the bottleneck problem,¹⁹⁸ often it does not because of transaction costs, strategic behavior, uncertainty, or other factors.¹⁹⁹

195. FTC GLOBAL COMPETITION REPORT, *supra* note 153, at 8-18 (footnote omitted); *see also* Scotchmer, *supra* note 193, at 29 (noting examples of cumulative innovation such as the many improvements that immediately followed Eli Whitney’s invention of the cotton gin, and the ongoing improvement of insulin drugs, antibiotics, and anticlotting drugs). Professors James Bessen and Eric Maskin demonstrate that because of the sequential and complementary nature of innovation in the software industry, patent protection has reduced innovation and social welfare. They substantiate their hypothesis with observations of cross-licensing in the computer and semiconductor industries, the positive relationship between innovation and firm entry, and the correlation between the extension of patent protection to software in the 1980s and a relative decline in R&D activity. JAMES BESSEN & ERIC MASKIN, SEQUENTIAL INNOVATION, PATENTS, AND IMITATION 11–19 (Mass. Inst. of Tech., Working Paper No. 00-01, 2000), available at <http://www.researchoninnovation.org/patent.pdf>.

196. FTC INNOVATION REPORT, *supra* note 44, at 2-26.

197. Carrier, *supra* note 187, at 1083. Professors Robert Merges and Richard Nelson describe the related situation of blocking patents as one patentee’s having a broad, “dominant” patent on an invention and another’s having a narrower, “subservient” patent on an improved feature of the invention. Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 860–61 (1990). Neither of the patentees can practice their invention because, absent a license, the holder of the dominant patent cannot practice the improved feature claimed in the narrower patent, and the holder of the subservient patent cannot practice the invention. *Id.*

198. *See* John P. Walsh et al., *Effects of Research Tool Patents and Licensing on Biomedical Innovation*, in PATENTS IN THE KNOWLEDGE-BASED ECONOMY 285, 285–86 (Wesley M. Cohen & Stephen A. Merrill eds., 2003) (concluding that the most dangerous aspects of biocommons have not come to pass because participants have developed “working solutions” allowing their research to proceed).

199. Lemley, *supra* note 30, at 1052–61 (providing an array of reasons that efficient licensing might not occur, such as the “significant” transaction costs of IP licenses, the uncertainty over the difficulty of valuation and scope of the patent, other externalities, strategic behavior, and noneconomic, perhaps irrational, incentives). For historical examples demonstrating the “bargaining breakdown” that occurred when different generations of inventors were not able to enter into licenses, *see* Merges & Nelson, *supra* note 197, at 884–93, discussing the radio, electric, and aircraft industries.

c. *Diminished Public Domain, Speech, and Democracy.* Like the intergenerational bottleneck that hampers innovation in the patent arena, copyright protection often has hindered the cumulative development of creative works. As the duration, subject matter, and exclusive rights of copyright expand, the public domain is diminished. Although the concept of the public domain has undergone many iterations, it can most broadly be defined as “material that is unprotected by intellectual property rights, either as a whole or in a particular context, and is thus ‘free’ for all to use.”²⁰⁰

Because the creation of copyrightable works is a cumulative process, in which one work builds upon its predecessor, it vitally depends on access to works in the public domain. Examples are legion: composers recombine sounds that they have heard; novelists draw on other plots; playwrights use other literary characters; multimedia artists combine many small pieces of existing works into new creations; software writers use logic from other software; and cinematographers, actors, choreographers, architects, and sculptors transform currently existing works.²⁰¹ Absent access to building blocks in the public domain, many works would not be created. The expansion of copyright has kept many works out of the public domain, thereby threatening grave consequences for multigenerational creation. In fact, evidence already demonstrates that many works are not created because of the difficulty of entering into licensing agreements with copyright holders.²⁰²

200. James Boyle, *Foreword: The Opposite of Property?*, 66 LAW & CONTEMP. PROBS. 1, 30 (Winter/Spring 2003). Professor James Boyle traces the variations in the definition of the public domain along the axes of granularity and freedom: “granularity” encompasses the scope of the legal freedom required before a work is considered part of the public domain, whereas “freedom” explores whether the definition focuses on actual, substantive access or on “formal legal status under intellectual property laws.”

201. Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965, 966–67 (1990); see also LESSIG, *supra* note 34, at 9, 13, 105 (explaining that academics, playwrights, novelists, historians, filmmakers, musicians, and scientists have built upon previous works); VAIDHYANATHAN, *supra* note 11, at 117–48 (discussing cumulative development in music); Dennis S. Karjala, *The Term of Copyright*, in GROWING PAINS: ADAPTING COPYRIGHT FOR EDUCATION AND SOCIETY 33, 46 (Laura N. Gasaway ed., 1997) (citing works based on public domain sources such as “musical plays like *Les Miserables*, *Jesus Christ Superstar*, and *West Side Story*, the recent spate of high production quality films based on the works of Shakespeare and Jane Austen, satires like *Rosencrantz and Guildenstern Are Dead*, and even literary classics like James Joyce’s *Ulysses*” (footnote omitted)); Note, *Originality*, 115 HARV. L. REV. 1988, 1989–99 (2002) (providing additional examples).

202. Karjala, *supra* note 201, at 46.

The expansion of copyright (as well as of trademark and the right of publicity²⁰³) also limits speech. Copyright holders have ever greater ability to block expression commenting on copyrighted works, including political commentary,²⁰⁴ news reporting,²⁰⁵ parody,²⁰⁶ cultural critique,²⁰⁷ church dissent,²⁰⁸ and historical scholarship.²⁰⁹ Courts traditionally have reconciled the copyrightable protection of expression with the First Amendment guarantees of free speech by pointing to limits on copyright such as its limited term, the idea-expression dichotomy, and the fair use exception.²¹⁰ But to the extent

203. The text focuses on the dangers that copyright poses to expression, although the expansion of trademark and the right of publicity also presents related dangers. *See* *White v. Samsung Elecs. of Am., Inc.*, 989 F.2d 1512, 1513 (9th Cir. 1993) (Kozinski, J., dissenting from denial of rehearing en banc) (right of publicity); Lemley, *Lanham Act*, *supra* note 17, at 1710–12 (trademark); *see also* Rochelle Cooper Dreyfuss, *Expressive Generativity: Trademarks as Language in the Pepsi Generation*, 65 NOTRE DAME L. REV. 397, 397, 405 (1990) (noting that trademarks have become part of popular culture and are necessary for expression). For further discussion of the effects of trademarks and the right of publicity on speech, *see* Part IV.C.1, *infra*, which discusses genericide, nominative use, fair use, and parody, and Part IV.D.2, *infra*, which proposes a “functional use” defense to the right of publicity.

204. *See, e.g.*, *Dr. Seuss Enterprises, L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394, 1403 (9th Cir. 1997) (enjoining a satire of the O.J. Simpson trial).

205. *See, e.g.*, *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 542 (1985) (punishing the publisher of an unauthorized, prepublication release of excerpts from President Ford’s memoirs about his pardon of President Nixon).

206. *See, e.g.*, *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 571–72 (1994) (including a rap parody of a Roy Orbison song as a type of speech protected by fair use).

207. *See, e.g.*, *Walt Disney Prods. v. Air Pirates*, 581 F.2d 751, 752 (9th Cir. 1978) (addressing a “counterculture” parody of Disney characters).

208. *See, e.g.*, *Worldwide Church of God v. Phila. Church of God, Inc.*, 227 F.3d 1110, 1113 (9th Cir. 2000) (discussing the distribution of a repudiated church leader’s tract).

209. *See, e.g.*, *Salinger v. Random House, Inc.*, 811 F.2d 90, 92, 100 (2d Cir. 1987) (protecting author J.D. Salinger’s unpublished letters from copyright infringement). *See generally* Neil Weinstock Netanel, *Locating Copyright Within the First Amendment Skein*, 54 STAN. L. REV. 1, 7 & nn.15–21 (2001) (noting that “[c]opyright’s speech encumbrance cuts a wide swath”).

210. *See, e.g.*, *Harper & Row*, 471 U.S. at 560 (emphasizing the Copyright Act’s distinction between “copyrightable expression and uncopyrightable facts and ideas”); *Zacchini v. Scripps-Howard Broad. Co.*, 433 U.S. 562, 577 n.13 (1977) (employing cases citing *Melville B. Nimmer, Does Copyright Abridge the First Amendment Guarantees of Free Speech and Press?*, 17 UCLA L. REV. 1180, 1203 (1970) to show that “copyright law does not abridge the First Amendment because it does not restrain the communication of ideas or concepts”). Relying on the dichotomy between expression (which can be copyrighted) and ideas (which cannot) does not successfully carve out a space for the First Amendment to operate because of the indeterminacy of the dichotomy and the need to copy particularly effective expression. Netanel, *supra* note 209, at 13–20. *See generally* Alfred C. Yen, *A First Amendment Perspective on the Idea/Expression Dichotomy and Copyright in a Work’s “Total Concept and Feel,”* 38 EMORY L.J. 393 (1989).

that these no longer constitute effective limits, the First Amendment faces real dangers.²¹¹

Expansive copyright also threatens the decentralization that is essential for democracy.²¹² As discussed in greater detail below,²¹³ decentralization allows challenges to the prevailing orthodoxy and permits smaller entities to contribute to public discourse.²¹⁴ Yet vertical and horizontal consolidation have swept through the entertainment industry in recent years, increasing the control possessed by the conglomerates and making it more difficult for outsiders to use copyrighted works controlled by these companies.²¹⁵ In short, the expansion of copyright has ominous consequences for the public domain, free speech, and the decentralization and discourse that are crucial to democracy.

Thus, the conclusion of Part II is that limits on IP rights, which are generally appropriate to achieve non-innovation-based policies, are even more acceptable given that the traditional story of IP is often inaccurate and that IP protection poses significant dangers. Part II also has shown that IP cannot escape the imposition of limits by claiming that property (which, as I show below, is replete with limits) is characterized by a far less accurate traditional story or much stronger dangers. Finally, to the extent that IP is becoming propertized, the adoption of limits is even more appropriate.

211. See Netanel, *supra* note 209, at 7–30 (contending that the safety valves allowing for operation of the First Amendment might have been effective when copyright scholar Melville Nimmer introduced them in 1970 but that given the expansion of copyright, they no longer serve this function).

212. See *Associated Press v. United States*, 326 U.S. 1, 20 (1945) (recognizing that “the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public”). The Court reiterated this notion in the context of the “must-carry” rules for broadcast television: “Federal policy . . . has long favored preserving a multiplicity of broadcast outlets . . . [because b]roadcast television . . . has been an essential part of the national discourse on subjects across the whole broad spectrum of speech, thought, and expression.” *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 194 (1997) (citations omitted).

213. See *infra* notes 459–77 and accompanying text.

214. See Benkler, *supra* note 141, at 377–81 (arguing that concentrated information production suppresses “challenges to prevailing wisdom that are necessary for robust political discourse”).

215. See *infra* notes 459–77 and accompanying text.

III. THE LIMITS OF PROPERTY

Property rights are not absolute,²¹⁶ but are cabined by several important limits.²¹⁷ The foundational rights of property law are widely recognized to consist of the right to exclude, the right to transfer, and the right to use.²¹⁸ Among these rights, the right to exclude is considered the most important.²¹⁹ The right to transfer allows the conveyance of property to those who can use it most productively.²²⁰ And the right to use envelops not only use but also other rights that sometimes are considered separately, such as rights of access, extraction, and management.²²¹

This Article offers a paradigm structure that delineates the rights and limits of property law. The structure that most lucidly allows the

216. To be clear, the rhetoric of property has tended to be more absolute than the reality of property. *See supra* note 13.

217. For a discussion of common law limits on the privileges and duties of entitlement ownership, see Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1361–62 (1989). *See also* Jacqueline Lipton, *Information Property: Rights and Responsibilities*, 56 FLA. L. REV. 135, 174 (2004) (mentioning obligations based on doctrines of waste, a landlord's duty to repair, easements, and restrictive covenants).

218. *See, e.g.*, Gordon, *supra* note 217, at 1354 (noting that the three rights are at the heart of courts' and laypersons' understandings of property); Jeremy Waldron, *Property Law*, in COMPANION TO PHILOSOPHY OF LAW AND LEGAL THEORY 3, 8 (Dennis Patterson ed., 1996) (calling the rights "the most striking incidents of ownership"). To be precise, "use" is a privilege rather than a right. *See* Gordon, *supra* note 217, at 1359 ("A privilege is an entitlement to be free of governmental interference or compulsion."). I refer to it as a right for ease of reference.

219. *See* Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979) ("[O]ne of the most essential sticks in the bundle of rights that are commonly characterized as property [is] the right to exclude others."); *see also* Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 741–52 (1998) (advocating the primacy of the right to exclude based on its logic, history, and ubiquity). *But see* Adam Mossoff, *What Is Property? Putting the Pieces Back Together*, 45 ARIZ. L. REV. 371, 376 (2003) (concluding that the exclusion theory "fails in producing a concept of property that can serve as a viable, substantive foundation for our property doctrines"); Rose, *supra* note 104, at 631 (critiquing the notion of property as the right to exclude).

220. *See also* POSNER, *supra* note 93, at 35 (contending that the right to transfer furthers efficiency); Waldron, *supra* note 218, at 8 (explaining that the right to transfer allows the self-perpetuation of the system of private property).

221. *See* Charlotte Hess & Elinor Ostrom, *Ideas, Artifacts, and Facilities: Information as a Common-Pool Resource*, 66 LAW & CONTEMP. PROBS. 111, 124 (Winter/Spring 2003) (defining access as "[t]he right to enter a defined physical area and enjoy nonsubtractive benefits," extraction as "[t]he right to obtain resource units or products of a resource system," and management as "[t]he right to regulate internal use patterns and transform the resource by making improvements"). The limits on various subsets of use-related rights are similar enough—and the resultant complexity of separate categorization confusing enough—that a general right of use suffices for the purposes of this Article.

plotting of rights against limits is based on the bundle of rights. The bundle of rights theory currently predominates in the courts.²²² Admittedly, the theory has received criticism of late—in particular on account of its neglect of property’s in rem nature and because of its amorphousness.²²³

These critiques, however, do not deprive one instantiation of the theory from playing a useful role for the purposes of this Article. In considering the limits of property in the context of the various rights, I do not compare the relative significance of various rights, nor do I determine the extent to which the removal of particular rights constitutes a taking of property. Rather, I use the rights *in conjunction* to organize property doctrines and limits.

To be sure, the shape of property rights likely would differ under regimes other than the bundle of rights theory, such as one focusing more specifically on the in rem nature of property. But the crucial point is that *any* paradigm offered to explain property law today—from bundle of rights to in rem to any other organizing principle—must carve out a position for the limits of property. Although I use three of the bundle of rights as my organizing structure to illustrate property limits, such limits are indispensable under any paradigm.

In this Part, I survey the vast contours of property doctrine to discern limits to the rights to exclude, transfer, and use based upon development, necessity, and equity. These limits are consistent with multiple theories of property, including utilitarianism, personhood,

222. See, e.g., *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1027 (1992) (explaining that landowners receive a “‘bundle of rights’ . . . when they obtain title to property”); *Pruneyard Shopping Ctr. v. Robins*, 447 U.S. 74, 82 n.6 (1980) (stating that the term “property” in the Takings Clause “includes the entire ‘group of rights inhering in the citizen’s [ownership]’” (alteration in original) (quoting *United States v. Gen. Motors Corp.*, 323 U.S. 373, 378 (1945))); *Andrus v. Allard*, 444 U.S. 51, 66 (1979) (noting that “the destruction of one strand in the . . . full ‘bundle’ of property rights . . . is not a taking because the aggregate must be viewed in its entirety”).

223. See Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 *YALE L.J.* 357, 359, 385–88 (2001) (arguing that the in rem nature of property rights informs anyone who comes across property of certain universal “negative duties of abstention with respect to that thing,” reduces information transaction costs, and explains the “legal standardization of property forms” known as *numerus clausus*); J.E. Penner, *The “Bundle of Rights” Picture of Property*, 43 *UCLA L. REV.* 711, 714 (1996) (lamenting “the absence of” an “explanatory model” provided by the bundle of rights, with the limitless multiplication of rights weakening its predictive effect); see also Michael A. Heller, *The Boundaries of Private Property*, 108 *YALE L.J.* 1163, 1189, 1193–94 (1999) (remarking that the bundle theory fails to explain the relatively stable relations among property owners and that a focus on the “thingness” nature of property would provide greater certainty to property law and better delineate the boundaries of private property).

and labor.²²⁴ Although the framework for limiting IP that I offer below is most consistent with the utilitarian construct,²²⁵ recognizing limits in property law is consistent with any proffered justification for the discipline.

My categorization nonetheless bears several caveats. First, my selection of three particular limits is not meant to deny the possibility of other potential limits. Second, certain doctrines may fall into more than one category. Third, the placement of a doctrine into a particular category of rights and limits could conceivably elicit debate. Fourth (and relatedly), the multiplicity of rationales for property in general and for specific doctrines in particular ensure that the limit upon which I focus for each doctrine may not fully explain the full contours of the doctrine. Despite these caveats, the variety and number of doctrines illustrating each of the categories of restrictions demonstrate the importance of limits in property law.

A. *Development*

The development of land has played an important role not only in the history of the United States, but also in the creation of property rights. It is therefore no surprise that the theme has also surfaced frequently as a defense to property rights. “Development” initially referred to the transformation of wilderness into productive land. As the exhaustability of wilderness resources has become apparent, conceptions of development have changed. Although the cultivation of land still appears in some property doctrines (such as adverse possession), conceptions of development have expanded to encompass the coordinated growth of communities (zoning), the coexistence of neighbors (easements, servitudes), and the prevention of resource depletion (waste, limits on the rule of capture). As a general matter, my conception of development endeavors to maximize the value of property at issue in a given dispute.

224. See *supra* note 88 and accompanying text. Adverse possession, for example, reflects not only a utilitarian conception of robust land development but also personhood and labor theories: an adverse possessor identifies more directly with the land than does its absentee owner (personhood) and has a Lockean claim based on development of the land (labor). See Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 476–77 (1897) (justifying adverse possession by stating that “[a] thing which you have enjoyed and used as your own for a long time . . . takes root in your being and cannot be torn away without your resenting the act and trying to defend yourself, however you came by it”).

225. See *infra* note 391.

Although this expansion has made the definition of development less certain, a limit based on development remains an appropriate means by which to cabin property rights. The significance of development at the thematic level for multiple property theories—in particular, for current conceptions of utilitarianism—counsels a role for the defense at the level of doctrine.

In particular, the theme of development cabins the right to exclude by recognizing several types of easements, restrictions on the rule of capture, and the rule protecting bona fide purchasers. It restrains the right to transfer through laws on adverse possession, the Rule Against Perpetuities, restraints on alienation, limits on a landlord's consent to transfer, and *numerus clausus*. And it limits the right to use through laws on zoning, nuisance, irrevocable licenses, waste, and servitudes.

1. *Right to Exclude: Easements, Capture, Bona Fide Purchasers.* Easements offer the first example of a development-based limit on the right to exclude. An easement is an interest in land that allows a person to use or enjoy land owned by another.²²⁶ Imposing such burdens and benefits on land generally reflects a “rational economic decision” about how to maximize the land's value, thereby promoting development.²²⁷

The development limit appears not only in *express easements*—which appear explicitly in written instruments such as deeds and wills²²⁸—but also in three types of implied easements. *Easements implied from an apparent and continuous use* encourage the continuity of existing land uses, thereby fostering the certainty and predictability that is conducive to the development of land.²²⁹ *Easements by necessity* make landlocked land available to the market and allow the cultivation and improvement of otherwise

226. 2 THOMPSON ON REAL PROPERTY § 60.02(a), at 391 (David A. Thomas ed., 1994).

227. JOHN G. SPRANKLING, UNDERSTANDING PROPERTY LAW § 32.03(C), at 513 (2000).

228. See 14 POWELL ON REAL PROPERTY § 34.04[1], at 34-24 (Michael Allen Wolf ed., 2000) (indicating that deeds and wills are the most obvious methods by which real property can be burdened).

229. See SPRANKLING, *supra* note 227, § 32.04(C), at 517. For example, in *Van Sandt v. Royster*, 83 P.2d 698 (Kan. 1938), the court found that prior use was apparent even though it involved an underground sewer. This expansive interpretation made it easier to remove sewage, which promoted property development by forestalling duplicative investment and higher costs. *Id.* at 701.

undevelopable land.²³⁰ Finally, the development emphasis in easement law manifests itself in the *default position for ambiguous easements*. When it is unclear if an easement is appurtenant (benefiting an easement owner as owner of the land) or in gross (benefiting the holder without regard to land ownership),²³¹ there is a presumption in favor of the former, facilitating productive use of the land by imposing the burdens of easements only on neighboring landowners.²³²

Similar to easements, *limits on the rule of capture* illustrate the development constraint.²³³ All states today have adopted hunting laws that impose limits on capturing *wild animals*, such as licenses and hunting seasons.²³⁴ The capture of *oil and natural gas* has been

230. See *Chapdelaine v. Sochocki*, 635 N.W.2d 339, 343 (Mich. Ct. App. 2001) (stating that easements by necessity reveal a public policy favoring “the productive and beneficial use of property”); *Schmidt v. Eger*, 289 N.W.2d 853, 854 (Mich. Ct. App. 1980) (same); see also 14 POWELL ON REAL PROPERTY, *supra* note 228, § 34.07[1], at 34-46 (noting that easements by necessity “came to be supported by public policy in order to prevent land from remaining nonusable”).

231. 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 60.02(f)(5), at 403.

232. See, e.g., *Nelson v. Johnson*, 679 P.2d 662, 663 (Idaho 1984) (finding that an easement “for the watering of livestock owned by the sellers” was an easement appurtenant); RESTATEMENT (THIRD) OF PROPERTY: SERVITUDES § 4.5(2) (2000) (“In cases of doubt, a benefit should be construed to be appurtenant rather than in gross.”). This position reduces the number of easements and makes it easier to locate easement owners, who are located on the neighboring land. JOSEPH WILLIAM SINGER, INTRODUCTION TO PROPERTY § 5.5.3, at 204 (2001).

233. The rule of capture was most famously articulated in *Pierson v. Post*, 3 Cai. R. 175 (N.Y. Sup. Ct. 1805), in which the court held that hunters could possess wild animals only by capture or mortal wounding, rather than through “mere pursuit.” *Id.* at 178.

To be clear, the relationship between rights and limits on the rule of capture differs from the other examples discussed in this Section. Exclusionary and use rights attach only at the time that a fugitive resource is captured; before that time, no one has rights in the resource. Moreover, limits on absolute rights are discernible not in relation to the individual unit but by viewing the resource stock as a whole. In other words, hunters’ rights to exclude others from particular animals that they have captured in accordance with hunting laws are unlimited; in contrast, their right (upon assumed capture) to exclude others from a certain number of the remaining members of the stock *is* limited. The restrictions on the rule of capture can be viewed not only as a regime of limits constraining absolute rights but also as a regime of more limited rights.

234. Rance L. Craft, *Of Reservoir Hogs and Pelt Fiction: Defending the Ferae Naturae Analogy Between Petroleum and Wildlife*, 44 EMORY L.J. 697, 726 (1995). Other restrictions include bag limits, which restrict the number of animals that a hunter can take within a particular period, and tradeable rights such as individual transferable quotas (ITQs), which reduce overfishing by allocating to each fisherman a certain number of fish. *Id.* at 729; see Ransom E. Davis, *Individually Transferable Quotas and the Magnuson Act: Creating Economic Efficiency in Our Nation’s Fisheries*, 5 DICK. J. ENVTL. L. & POL’Y 267, 306-07 (1996) (explaining the economic efficiency of ITQs).

restricted by conservation laws such as those dictating the spacing of wells and providing for the coordinated development of reservoirs.²³⁵ Judicial limitations on owners of riverbanks (riparian owners), allowing them to take *surface waters*²³⁶ only for “reasonable uses” that do not unreasonably interfere with the uses and needs of others, promote the long-term development of the resource.²³⁷ And doctrines of reasonable use embraced in Eastern and Midwestern states²³⁸ prevent uses of *groundwater* that unreasonably injure other lawful users.²³⁹ Limits on the rule of capture thus preserve many types of resources.

Another, more subtle, example of a development-based limit on the right to exclude is the rule on *bona fide purchasers (BFPs)*, which provides that “[a] person with voidable title has power to transfer a good title to a good faith purchaser for value.”²⁴⁰ This rule fosters the

235. Craft, *supra* note 234, at 730–32; see Dean Lueck, *The Rule of First Possession and the Design of the Law*, 38 J.L. & ECON. 393, 426 (1995) (noting that most oil- and gas-producing states use well-spacing laws to prevent the depletion of neighboring lands and require the development of reservoirs if most surface owners agree). The coordinated development of reservoirs occurs through unitization, which, upon agreement of a supermajority of surface owners, binds all of the owners to production quotas and well locations. Other laws prevent drilling along property lines to deplete neighbors’ reserves and allow state conservation agencies to deny permits for wells that would harm reservoirs. Craft, *supra* note 234, at 728; see Lueck, *supra*, at 426 (noting the emergence of statutory conservation regulation to mitigate against “rule of capture waste”); see also 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 49.02(d)(2), at 354–56 (listing statutory techniques to protect correlative rights and to guard against waste); Smith, *supra* note 13, at 1027–37 (recognizing the importance of statutory and administrative schemes in oil and gas law).

236. “Surface waters” are found “in defined bodies or diffused surface waters.” Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century*, 25 U. ARK. LITTLE ROCK L. REV. 9, 41 (2002).

237. 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 50.08(k), at 714. For a discussion of the “sharing and accommodation” that often arises in water law, see Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529, 1541–42 (1989).

238. See Dylan O. Drummond, *Texas Groundwater Law in the Twenty-First Century: A Compendium of Historical Approaches, Current Problems, and Future Solutions Focusing on the High Plains Aquifer and the Panhandle*, 4 TEX. TECH J. TEX. ADMIN. L. 173, 198 (2003) (listing Arizona, Illinois, Iowa, Kentucky, Maryland, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Washington, and West Virginia as states following the reasonable use rule).

239. Dellapenna, *supra* note 236, at 44. The reasonable use doctrine takes two forms. The American rule requires that all withdrawn groundwater be used on the overlying land or within the overlying drainage basin, whereas the Restatement rule allows use outside these boundaries. *Id.* The correlative rights doctrine is a variation of the reasonable use rule that provides for greater use as the size of the land increases. Drummond, *supra* note 238, at 200.

240. U.C.C. § 2-403(1) (2003). The purchaser receives this protection even if “the delivery was procured through fraud punishable as larcenous under the criminal law.” U.C.C. § 2-

purchase and sale of goods without requiring parties to engage in costly investigations of the rights of all previous possessors.²⁴¹ It thus encourages development in the form of a more robust commercial marketplace.

The BFP concept also applies to land, serving as an exception to the “first in time” rule employed by common law courts to resolve conflicting land claims.²⁴² The BFP exception fosters the development of land by providing purchasers who have conducted title searches with the certainty of receiving priority over parties who failed to record their interests and thus rendered themselves difficult to find.²⁴³

2. *Right to Transfer: Adverse Possession, Rule Against Perpetuities, Alienation, Tenant’s Right to Transfer, Numerus Clausus.* Development-based limits also restrict the right to transfer. A careful parsing of the right to transfer uncovers three embedded decisions reserved to the owner: (1) the decision to transfer, (2) the recipient of transfer, and (3) the conditions of transfer. However, property doctrine limits an owner’s prerogative as to each of these decisions: adverse possession limits a property owner’s decision whether to transfer; doctrines restricting contingent future interests limit the choice of transferees; and *numerus clausus*, restrictions on the landlord’s consent to a tenant’s transfer, and the prohibition of or requirement of reasonableness for restraints on alienation limit the conditions of transfer.

An absolute right to transfer would guarantee an owner’s right *not* to transfer. The doctrine of *adverse possession* intrudes upon this

403(1)(d). Thus, if *A* fraudulently induces *O* to sell an item, and *A* then sells it to *P*—and if *P* pays for the item and does not suspect any fraud—then *P* is the rightful owner.

241. See *Johnson & Johnson Prods., Inc. v. Dal Int’l Trading Co.*, 798 F.2d 100, 104 (3d Cir. 1986) (noting that the exception “promote[s] commerce by reducing transaction costs”); *Landshire Food Serv., Inc. v. Coghil*, 709 S.W.2d 509, 512 (Mo. Ct. App. 1986) (explaining that the rule “promote[s] the free transferability of property in commerce”).

242. See Eric Kades, *The Laws of Complexity and the Complexity of Laws: The Computational Complexity Theory for the Law*, 49 RUTGERS L. REV. 403, 449 (1997) (discussing how the BFP concept distinguishes the “notice” and “race-notice” recording systems from pure race systems). The BFP exception protects a later recipient of title who purchases land for value without notice of prior unrecorded interests. 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 92.15(a), at 165. Nearly all states today protect BFPs, under either a “notice” statute (which requires BFP status) or a “race-notice” statute (which requires not only BFP status but also that the BFP be the first to record). 14 POWELL ON REAL PROPERTY, *supra* note 228, § 82.02[1], at 82-14; WILLIAM B. STOEBOCK & DALE A. WHITMAN, *THE LAW OF PROPERTY* § 11.9, at 872 (3d ed. 2000).

243. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 82.01[3], at 82-14.

right, forcing a transfer when the requirements of the doctrine are met.²⁴⁴ Although adverse possession serves many purposes, such as clearing stale claims,²⁴⁵ one of its crucial justifications is to encourage the development of land.²⁴⁶ Beginning in the nineteenth century, courts promulgated rules that encouraged settlement and productive economic use of the nation's wilderness.²⁴⁷ Land, of course, is more readily developed when the law transfers title from a landowner who does not undertake any productive activity to an adverse possessor who constructs buildings or cultivates the land.²⁴⁸

Development-based limits on an owner's ability to select transferees appear in doctrines restricting contingent future interests.²⁴⁹ The most famous restriction on contingent future interests is the *Rule Against Perpetuities*. The Rule provides that "No interest is good unless it must vest, if at all, not later than twenty-one years after some life in being at the creation of the interest."²⁵⁰ Admittedly, the Rule has plagued generations of law students and introduces

244. The typical requirements are (1) possession that is (2) open and notorious, (3) hostile, (4) continuous, and (5) exclusive (6) for the statute of limitations period. *E.g.*, 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 87.05, at 111.

245. *See* 14 POWELL ON REAL PROPERTY, *supra* note 228, § 91.01[4], at 91-10. Other rationales include quieting title, Henry W. Ballantine, *Title by Adverse Possession*, 32 HARV. L. REV. 135, 135 (1918), and the personhood theory (by which the improver gains more than the owner loses by switching title), Holmes, *supra* note 224, at 476-77.

246. Notions of development, of course, carry greater risks today than they did two centuries ago. *See* John G. Sprankling, *An Environmental Critique of Adverse Possession*, 79 CORNELL L. REV. 816, 816 (1994) (noting that the "'development model' is fundamentally antagonistic to the twentieth century concern for preservation").

247. *Id.* at 844. As Justice Story explained: "The country was a wilderness; and the universal policy was to procure its cultivation and improvement." *Van Ness v. Pacard*, 27 U.S. (2 Pet.) 137, 145 (1829).

248. Easements by prescription—which often involve power lines, drainage, encroaching buildings, and airplane flights overhead and which foster development by rewarding an easement owner's use and punishing a landowner's lack of use—provide an analogous example, albeit one that allows use rather than transfer of ownership. *See generally* 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 60.03(b)(6)(iii), at 436.

249. Promoting alienability encourages the development of land by allowing its transfer to parties who would put it to higher-valued uses. I therefore treat such doctrines as development-based limits on the right to transfer.

Although developments such as the increasing influence of the trust have diminished the significance of these doctrines, they nonetheless demonstrate some of the many varied limits on the absolute nature of the property right. The replacement of these doctrines with trusts is consistent with the promotion of alienability because trusts offer significant flexibility, including the power to transfer. *See* JESSE DUKEMINIER & JAMES E. KRIER, PROPERTY 237 (5th ed. 2002) (noting that a trustee typically has power to "sell, lease, mortgage, remove minerals, or do whatever a prudent person would do with respect to the property").

250. JOHN CHIPMAN GRAY, THE RULE AGAINST PERPETUITIES § 201 (4th ed. 1942).

numerous difficulties²⁵¹ that have led to its modification or abolition in most jurisdictions.²⁵² Nonetheless, the Rule embodies the policy that an owner should not be able to tie up interests too far into the future and thus represents a development-based limit on the right to transfer.²⁵³

In addition to restricting the decision to transfer and selection of transferees, development-based limits cabin the conditions of transfer. For example, courts typically strike down *total restraints on alienation*, which prevent the transfer of property interests.²⁵⁴ Such invalidation promotes development because the restraints make property unmarketable, prevent it from being used by others who would have a greater ability to develop the land, and discourage

251. Two of the difficulties of applying the Rule are determining the relevant lives in being and imagining every conceivable scenario—such as the “fertile octogenarian” or the “unborn widow”—in which an interest might vest. *See* *Jee v. Audley*, 29 Eng. Rep. 1186 (Ch. 1787) (assuming that a seventy-year-old woman could have children); 10 POWELL ON REAL PROPERTY, *supra* note 226, § 72.03[4], at 72-19 to 72-21 (explaining the “unborn widow” scenario).

252. Many jurisdictions have adopted the Uniform Statutory Rule Against Perpetuities (USRAP), UNIF. STATUTORY RULE AGAINST PERPETUITIES WITH 1990 AMENDS., 8B U.L.A. 321 (1990), which uses a “wait-and-see” approach by which a court determines if the interest actually vests within a ninety-year period and validates it if it does. *See* *DUKEMINIER & KRIER*, *supra* note 249, at 327–28 (listing twenty-six states that have adopted the USRAP). If the interest does not vest within ninety years, a court will reform it “to most closely approximate the dispositive plan of the donor and vest within 90 years.” *Id.* at 328.

253. *See* 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 28.02, at 558 (noting that the Rule “is designed to prevent remoteness of vesting and thereby leave control of the wealth of the world more in the hands of the living than in the hands of the dead” and that it consequently “keeps property available for productive development”); *see also* 14 POWELL ON REAL PROPERTY, *supra* note 228, § 71.01[1], at 71-3 (noting evidence that the Rule promoted alienability of land as early as the end of the twelfth century). Other doctrines that have limited the selection of transferees include the Doctrine of the Destructibility of Contingent Remainders, the Rule in *Shelley’s Case*, and the Doctrine of *Worthier Title*. 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 28.02(a), at 559.

254. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 77.02, at 77-7 to 77-8; *see* Max Gibbons, *Of Windfalls and Property Rights: Palazzolo and the Regulatory Takings Notice Debate*, 50 UCLA L. REV. 1259, 1281–82 (2003) (recognizing the “overwhelming bias in the Anglo-American common and statutory law” against total restraints on alienation). An example of such a restraint is “to A, but if A attempts to transfer the premises, then to B.” There are three types of total restraints on alienation: (1) disabling restraints, which prohibit the owner from transferring the interest; (2) promissory restraints, by which the grantee promises not to transfer the interest; and (3) forfeiture restraints, which specify that ownership will revert to a specified person if the current owner attempts to transfer the property. SINGER, *supra* note 232, § 6.7.2, at 271.

improvements to land.²⁵⁵ *Partial restraints on alienation* prevent the transfer of an interest for a certain period of time or limit the range of potential transferees.²⁵⁶ Most courts invalidate temporal restraints, which present some of the same dangers as total alienation restraints.²⁵⁷

In the landlord-tenant context, many lease clauses require the *landlord's consent for a tenant's assignments or subleases* but do not provide a standard for granting consent.²⁵⁸ Although the traditional approach allowed landlords to refuse consent for any reason, the emerging trend permits landlords to withhold consent only if they have "a commercially reasonable objection to . . . assignment."²⁵⁹ Such a position limits restraints on alienation, which is of particular benefit when there are shortages of residential and commercial space.²⁶⁰

Another example of a development-based limit on the conditions of transfer is the principle of *numerus clausus*, which restricts the

255. See 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 29.03(b), at 707–08 (noting that restraints on alienation are repugnant to the nature of a fee simple estate and to owners' "right to use and dispose of the estate").

256. See 14 POWELL ON REAL PROPERTY, *supra* note 228, § 77.03, at 77-9 (describing the effect of partial restraints on alienation).

257. *Id.* The Restatement, for example, recommends the voiding of restraints that "make it impossible for any period of time . . . to transfer such interest." RESTATEMENT (SECOND) OF PROPERTY: DONATIVE TRANSFERS § 4.1(1) (1983); see also *id.* § 4.2(2) (noting that other disabling restraints are invalid only if "the legal policy favoring freedom of alienation does not reasonably apply"). Some courts uphold restrictions that prevent transfer to specified individuals, contending that "the interest is still alienable because it may be conveyed to anyone else in the world." SINGER, *supra* note 232, § 6.7.2, at 272. The Restatement focuses on the reasonableness of these restraints, based on their purpose, nature, and duration. RESTATEMENT (SECOND) OF PROPERTY: DONATIVE TRANSFERS § 4.1(2); see also *id.* § 4.2(3) (listing six common features of valid restraints, such as whether the restraint is limited in duration or increases land value).

258. See 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 42.04(b)(3)(ii), at 262 (noting that many leases contain "silent consent" clauses with no standard for refusing consent).

259. *Kendall v. Ernest Pestana, Inc.*, 709 P.2d 837, 841 (Cal. 1985); see also *id.* at 843 (stating that "in our increasingly urban society . . . the necessity of permitting reasonable alienation of commercial space has become paramount"). The court explained that determinations of reasonableness "compar[e] the justification for a particular restraint on alienation with the quantum of restraint actually imposed by it" and noted that "[d]enying consent solely on the basis of personal taste, convenience or sensibility is not commercially reasonable." *Id.* at 843, 845.

260. See 2 THOMPSON ON REAL PROPERTY, *supra* note 226, § 42.04(b)(3)(ii), at 263 (suggesting that the minority "reasonableness standard" represents a balance between the competing interests of "avoiding unreasonable restraints on alienation" and "protecting the landlord's property interest").

forms of transferable interests to a finite set of categories.²⁶¹ Professors Thomas Merrill and Henry Smith trace the principle across much of the property landscape, including estates in land,²⁶² concurrent interests,²⁶³ and nonpossessory interests.²⁶⁴ They view *numerus clausus* as a “device to standardize property rights”²⁶⁵ that “reduce[s] the widespread information-gathering and processing costs”²⁶⁶ inherent in a system of in rem rights.²⁶⁷ For the purposes of this Article, *numerus clausus* demonstrates limits on the conditions of transfer: owners wishing to transfer cannot create their own form of interest but must select from “a fixed and closed menu of forms.”²⁶⁸

3. *Right to Use: Zoning, Nuisance, Licenses, Waste, Servitudes.*

One ubiquitous limit on use, affecting nearly all land in the United States, is *zoning*.²⁶⁹ Zoning ordinances typically divide land into residential, commercial, and industrial districts and allow only certain uses in each district.²⁷⁰ They also may specify requirements for buildings and lots.²⁷¹ Zoning has expanded far beyond its initial compass as an early-twentieth-century response to the “[s]moke,

261. Bernard Rudden, *Economic Theory v. Property Law: The Numerus Clausus Problem*, in 3 OXFORD ESSAYS IN JURISPRUDENCE 239, 240–41 (John Eekelar & John Bell eds., 1987).

262. The forms are limited to the present possessory interests of fee simple absolute, defeasible fee simple, fee tail, life estate, and lease, along with their corresponding future interests. Merrill & Smith, *supra* note 69, at 12–14.

263. This category consists of the tenancy in common, joint tenancy, marital property, trusts, condominiums, cooperatives, and time-shares. *Id.* at 14–16.

264. These interests include easements, real covenants, equitable servitudes, and profits. *Id.* at 16–17.

265. Merrill & Smith, *supra* note 223, at 387.

266. *Id.* The in rem nature of property interests provides that they “are good against the world,” which “presents a massive coordination problem.” *Id.*

267. Absent such a limited category of interests, third parties would need to obtain information about the characteristics of the new right created. *Id.*

268. *Id.* at 386.

269. See 12 POWELL ON REAL PROPERTY, *supra* note 228, § 79C.01, at 79C-7 (describing the main features of zoning ordinances). Every state has enacted zoning enabling laws that allow municipalities to create land-use regulations, and most states have also enacted such laws for counties. STOEBUCK & WHITMAN, *supra* note 242, § 9.11, at 577.

270. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 79C.01, at 79C-7; see *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 379–81 (1926) (upholding an ordinance that restricted the development of land to certain uses and designated areas).

271. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 79C.01, at 79C-7; see SINGER, *supra* note 232, § 13.3.1, at 600 (discussing “area” or “lot” zoning, which imposes minimum lot sizes and frontage requirements, and “building” or “bulk” regulations, which operate through restrictions such as setback requirements, height restrictions, floor-area ratios, minimum floor-space requirements, and limits on the percentage of a lot that can be covered by buildings).

odors, noise, disease, filth, [and] overcrowding” of urban areas;²⁷² today it serves to increase safety, promote health and welfare, conserve natural resources, maintain community purposes, and encourage the most appropriate use of land.²⁷³ In short, zoning plays a vital role in the comprehensive development of land on a community-wide level and is a potent example of development-based limits on the right to use.

The law of *nuisance* provides an additional limit on the use of land.²⁷⁴ A nuisance is a substantial and unreasonable interference with another’s use or enjoyment of land,²⁷⁵ such as noise,²⁷⁶ odors,²⁷⁷ and air²⁷⁸ or water²⁷⁹ pollution.²⁸⁰ Protecting land against unreasonable interference—which often takes the form of unpleasantness, discomfort, and danger—ensures that landowners’ investment in property will not be dissipated.²⁸¹ Interference with another’s use of land is unreasonable, according to the Restatement (Second) of

272. SPRANKLING, *supra* note 227, § 36.03(B)(1), at 591.

273. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 79C.03[2], at 79C-40 to 79C-70.

274. The discussion in the text focuses on private nuisances, which necessarily relate to owners’ use of land, rather than public nuisances, which, in targeting “unreasonable conduct that interferes with a right common to the general public,” may not relate to particular uses of land, 5 THOMPSON ON REAL PROPERTY, *supra* note 226, § 67.02(a), at 90. Nuisance represents a paradigmatic example of the use of a liability rule. *See generally* Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1115–24 (1972).

275. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 64.02[2], [3], at 64-10 to 64-11. The Restatement defines a nuisance as “a nontrespassory invasion of another’s interest in the private use and enjoyment of land.” RESTATEMENT (SECOND) OF TORTS § 821D (1977). The boundary between the physical invasion of land, traditionally the subject of trespass, and a nontrespassory invasion, the subject of nuisance, has blurred in recent years as courts have recognized the physical nature of, for example, odors and air pollution and consequently have expanded trespass liability. *Id.* § 821D, cmt. e.

276. *See, e.g.*, *Parker v. Ashford*, 661 So.2d 213, 218 (Ala. 1995) (racetrack); *Brewton v. Young*, 596 So.2d 577, 578 (Ala. 1991) (barking dogs); *Siglianese v. Vallone*, 637 N.Y.S.2d 284, 286 (Civ. Ct. 1995) (heavy metal rock band); *Harris v. Town of Lincoln*, 668 A.2d 321, 326 (R.I. 1995) (generator).

277. *See, e.g.*, *Spur Indus., Inc. v. Del E. Webb Dev. Co.*, 494 P.2d 700, 705 (Ariz. 1972) (cattle feedlot with odors and flies); *Payne v. Skaar*, 900 P.2d 1352, 1356 (Idaho 1995) (cattle feedlot); *Weinhold v. Wolff*, 555 N.W.2d 454, 461 (Iowa 1996) (hog farm); *Harris*, 668 A.2d at 326 (sewage treatment plant).

278. *See, e.g.*, *Thomsen v. Greve*, 550 N.W.2d 49, 55 (Neb. Ct. App. 1996) (wood stove).

279. *See, e.g.*, *Scheufler v. Gen. Hosp. Corp.*, 126 F.3d 1261, 1264 (10th Cir. 1997) (salt mining operations); *Tiegs v. Watts*, 954 P.2d 877, 881 (Wash. 1998) (paper and pulp mill).

280. *See generally* SINGER, *supra* note 232, § 3.2.3, at 113 (noting other types of pollution, such as chemical pollution and sewage).

281. *See id.* § 3.1, at 96 (“Limiting free use and development may be justified by the need to protect the ability of owners to derive benefit from their own property . . .”).

Torts, if “the gravity of the harm outweighs the utility of the actor’s conduct.”²⁸² The focus on the utility of conduct developed late in the history of nuisance law and plays an increasingly important role in the nuisance calculus.²⁸³

Another form of development-based limit on the right to use is the *irrevocable license*, which gives licensees security to invest in land development.²⁸⁴ Although a license—permission to use land for a particular purpose—typically is revocable, it can become irrevocable when a licensee, in reliance on the license, makes improvements to the land and when the licensor has knowledge of the license.²⁸⁵ In such circumstances, courts’ recognition of licensees’ substantial expenditures and their prohibition of license revocation prevents waste and encourages improvements.²⁸⁶

Limits on use apply in relation not only to physical neighbors but also to temporal neighbors. The doctrine of *waste* fosters the development of land when rights are divided between present and future interest holders.²⁸⁷ It prevents present owners from significantly

282. RESTATEMENT (SECOND) OF TORTS § 826(a) (1979).

283. SPANKLING, *supra* note 227, § 29.01, at 468, § 29.03, at 472. This factor encompasses the social value of the conduct, the suitability of the conduct to its location, and the impracticability of avoiding the invasion. RESTATEMENT (SECOND) OF TORTS § 828. Utilitarian concerns also affect the remedy, with courts balancing the equities between parties in determining whether to grant an injunction or award damages. In *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870 (N.Y. 1970), for example, the court ordered a factory to pay damages because of the factory’s emissions of dirt, smoke, and vibrations. *Id.* at 871. But the court refused to order the “drastic” remedy of shutting down a \$45 million plant with three hundred workers when the neighboring plaintiffs suffered only \$185,000 in damages. *Id.* at 873. *Boomer* and its vast progeny demonstrate the importance of the utilitarian rationale and the calibrated determination of both liability and damages in promoting development. *But see* Smith, *supra* note 13, at 1037–45 (questioning the expansive applicability of *Boomer* and of nuisance in general)

284. *See infra* notes 376–78 and accompanying text.

285. *See, e.g.*, McCoy v. Hoffman, 295 S.W.2d 560, 561 (Ky. 1956) (explaining that a license “becomes irrevocable and continues for so long a time as the nature of the license calls for” when “the licensee has exercised the privilege given him and erected improvements or made substantial expenditures on the faith or strength of the license”).

286. *See, e.g.*, Dupont v. Whiteside, 721 So. 2d 1259, 1263 (Fla. Dist. Ct. App. 1998) (finding that the construction of a \$240,000 house could lead to an irrevocable license); Holbrook v. Taylor, 532 S.W.2d 763, 766 (Ky. 1976) (finding a license irrevocable when the licensees had improved the premises, maintained the roadway, and built a \$25,000 residence); Dority v. Hiller, 986 P.2d 636, 639 (Or. Ct. App. 1999) (“An irrevocable license arises when the landowner’s promise to allow a use of the land for an unlimited time induces the other party to make significant expenditures for permanent improvements, consistent with the use for which the consent was given.”).

287. Marianne M. Jennings, *In Some Jurisdictions, Taxes Are a Form of Waste*, 25 REAL EST. L.J. 93, 93 (1996).

reducing the value of land.²⁸⁸ By preventing short-sighted uses of land and preserving opportunities for future interest holders, the doctrine of waste encourages multigenerational development.

Finally, *covenants* and *equitable servitudes* apply the burdens and benefits of land use covenants to successors to the original parties to an agreement.²⁸⁹ In large part, these restrictions foster the development of land by promoting certainty and stability.²⁹⁰ For example, if *A* covenants with *B* not to build a factory on *A*'s land but *A*'s successor *C* can do just that, then *B* would be more likely to sell the land or (along with potential purchasers) less likely to fully develop the land.²⁹¹

B. Necessity

In addition to development-based limits, the defense of necessity circumscribes the scope of property rights. This defense recognizes that property is only one of many systems of rights implicated in any particular setting, and that it is subject to displacement in certain situations. The rights granted by property law, as important as they are, are not universal trumps.²⁹² Admittedly, an expansive conception

288. *Id.* The doctrine of waste can be divided into the categories of affirmative waste, permissive waste, failure to prevent the conduct of trespassing strangers, and equitable waste. 9 POWELL ON REAL PROPERTY, *supra* note 228, § 56.05, at 56-12.

289. See Paula A. Franzese, "Out of Touch:" *The Diminished Viability of the Touch and Concern Requirement in the Law of Servitudes*, 21 SETON HALL L. REV. 235, 237 (1991) (explaining that "the value of any given servitude resides primarily in its ability to bind successors"). The primary difference between covenants and servitudes generally has been the remedy, with breaches of covenants leading to damages and breaches of equitable servitudes resulting in injunctions. 9 POWELL ON REAL PROPERTY, *supra* note 228, § 60.07, at 60-106.

290. Franzese, *supra* note 289, at 237.

291. See SPRANKLING, *supra* note 227, § 33.03, at 540 (noting that covenants safeguard landowners' "legitimate expectations" that the character of their property will not change). Common-interest communities such as condominiums and cooperatives demonstrate this development rationale. Equitable servitudes allow such communities to exist and protect the expectations of the residents. Restrictions that require residential use of the premises, limit noise, and impose architectural design controls attract and help retain residents. Absent the limits on use imposed by the running of the burdens to successors, the communities would lose most of their allure and, perhaps, some of the more than 40 million Americans currently living in them. See *id.* § 33.01, at 540; § 35.01, at 577-78; § 35.03(4), at 584.

At some point, the covenants and servitudes themselves could hinder alienability. Rules providing for the termination of servitudes if "there has been such a radical change in conditions" that the servitude is "of no substantial benefit" to the dominant estate further development by removing obsolete restrictions. RESTATEMENT (THIRD) OF PROPERTY: (SERVITUDES) § 7.10 cmt. c (2000).

292. Cf. RONALD DWORKIN, TAKING RIGHTS SERIOUSLY 193 (1977) (positing individual rights that utilitarian interests cannot overcome).

of necessity could dwarf property rights. But property doctrine reveals that the necessity defense serves in most cases to address critical societal needs. Necessity limits on the right to exclude prevent imminent harm, serve important social goals, protect speech, allow access to landlocked land, facilitate private eminent domain, and ensure the use of navigable waters. Limits on the right to transfer prevent the sale of items such as human organs and endangered species and provide for eminent domain. Restrictions on the right to use appear in the laws of takings, regulation, and lateral support.²⁹³

1. *Right to Exclude: Imminent Necessity, Social Necessity, Free Speech, Easements by Necessity, Private Eminent Domain, Public Trust.* Imminent necessity privileges entry onto another's land to save lives or property or to avoid some other serious harm²⁹⁴—for example, to “avert[] an imminent public disaster,”²⁹⁵ to flee from an attacking animal,²⁹⁶ to reclaim²⁹⁷ or remove²⁹⁸ chattel that has entered the property, to abate a private nuisance,²⁹⁹ and to execute a court order.³⁰⁰ Additionally, the privilege extends to a firefighter putting out a fire³⁰¹ and a police officer in hot pursuit of a fleeing

293. Eminent domain and takings are obvious examples of the use of a liability rule. See Calabresi & Melamed, *supra* note 274, at 1108.

294. SINGER, *supra* note 232, § 2.3.3, at 38. As the Restatement of Torts provides: “One is privileged to enter or remain on land in the possession of another if it is or reasonably appears . . . necessary to prevent serious harm to (a) the actor, or his land or chattels, or (b) the other or a third person, or the land or chattels of either . . .” RESTATEMENT (SECOND) OF TORTS § 197 (1977); see also *United States v. Schoon*, 955 F.2d 1238, 1239–40 (9th Cir. 1991) (stating that entrants must make four showings: that (1) they were faced with a choice of evils and chose the lesser evil, (2) they acted to prevent imminent harm, (3) they reasonably anticipated a direct causal relationship between their conduct and the harm to be averted, and (4) they had no legal alternatives to violating the law); *People v. Roberts*, 303 P.2d 721, 723 (Cal. 1956) (“Necessity often justifies an action which would otherwise constitute a trespass, as where the act is prompted by the motive of preserving life or property and reasonably appears to the actor to be necessary for that purpose.”); *Ploof v. Putnam*, 71 A. 188, 189 (Vt. 1908) (“A traveler on a highway who finds it obstructed from a sudden and temporary cause may pass upon the adjoining land without becoming a trespasser because of the necessity.”).

295. RESTATEMENT (SECOND) OF TORTS § 196.

296. *E.g.*, *Rossi v. DelDuca*, 181 N.E.2d 591, 593–94 (Mass. 1962).

297. RESTATEMENT (SECOND) OF TORTS § 198.

298. *Id.* § 199; *Macios v. Hensley*, 886 S.W.2d 749, 753 (Mo. Ct. App. 1994).

299. RESTATEMENT (SECOND) OF TORTS § 201.

300. *Id.* § 210.

301. See, *e.g.*, *Kreski v. Modern Wholesale Elec. Supply Co.*, 415 N.W.2d 178, 183 (Mich. 1987) (explaining that firefighters have a “public right” to enter land and noting that land owners may face criminal liability if they attempt to prevent firefighters from entering their property in the line of duty).

suspect³⁰² or making an arrest for a criminal offense.³⁰³ Each of these important purposes counsels limits on the owner's right to exclude.

The concept of necessity also incorporates minimal requirements of social assistance and free speech. The case of *State v. Shack*³⁰⁴ illustrates limits based on *social necessity*. In *Shack*, a health care field-worker and an attorney, both from nonprofit organizations, entered a private farm to aid migrant farmworkers.³⁰⁵ The court refused to find that the defendants trespassed because "the ownership of real property does not include the right to bar access to governmental services available to migrant workers"³⁰⁶ and because "necessity, private or public, may justify entry upon the lands of another."³⁰⁷ Similarly, the California Supreme Court upheld a regulation giving union organizers a right of access to private farms in order to speak with workers.³⁰⁸

In addition, courts have treated *free speech* protections under state constitutions as necessary limits on a landowner's right to exclude.³⁰⁹ For example, in *Pruneyard Shopping Center v. Robins*,³¹⁰ high school students sought to obtain support for a campaign against a United Nations anti-Zionist resolution by

302. SINGER, *supra* note 232, § 2.3.4, at 39.

303. RESTATEMENT (SECOND) OF TORTS § 204.

304. 277 A.2d 369 (N.J. 1971).

305. *Id.* at 370. The field-worker was there to remove sutures from a migrant worker; the attorney entered the land to discuss a legal problem with another worker. *Id.*

306. *Id.* at 371–72.

307. *Id.* at 373. The court quoted a leading treatise to emphasize that a landowner "must expect to find the absoluteness of his property rights curtailed by the organs of society, for the promotion of the best interests of others for whom these organs also operate as protective agencies" and that "[t]he necessity for such curtailments is greater in a modern industrialized and urbanized society than it was in the relatively simple American society of fifty, 100, or 200 years ago." *Id.* (quoting 5 POWELL ON REAL PROPERTY § 745, at 493–94 (Patrick J. Rohan ed. 1970)). For a contrary view, see *Jacque v. Steenberg Homes, Inc.*, 563 N.W.2d 154, 156–57 (Wis. 1997), awarding punitive damages against a mobile home company that crossed landowners' property to save time and to avoid potential dangers in delivering mobile homes.

308. *Agric. Labor Relations Bd. v. Superior Court*, 546 P.2d 687, 698 (Cal. 1976).

309. State constitutions provide the framework because the First Amendment applies only to state action and the Supreme Court has refused to treat shopping centers as the equivalent of small towns. See *Lloyd Corp. v. Tanner*, 407 U.S. 551, 569 (1972) (stating that property does not "lose its private character merely because the public is generally invited to use it for designated purposes"). Many states do not extend state constitutional protection to shopping centers. See *N.J. Coalition Against War in the Middle E. v. J.M.B. Realty Corp.*, 650 A.2d 757, 769 (N.J. 1994) (citing cases).

310. 447 U.S. 74 (1980).

soliciting signatures for a petition and talking to shoppers.³¹¹ The California Supreme Court, in a ruling affirmed by the U.S. Supreme Court,³¹² held that the state constitution “protect[s] speech and petitioning, reasonably exercised, in shopping centers even when the centers are privately owned.”³¹³ The general importance of freedom of speech in this country’s history ensures a role for the doctrine in limiting the right to exclude.

Three additional examples apply necessity in the context of a physical need for access. Just as imminence and social or speech needs render access to land necessary, so do certain physical needs. *Easements by necessity* present the first example. Access to a road is necessary for the enjoyment of land; without such access, landowners cannot leave their property without committing trespass.³¹⁴ In such a situation, the isolation of landowners would prevent their participation in most aspects of society and would cause them to hold their land “in perpetual idleness.”³¹⁵ The ability to exit one’s land is such a vital interest that easements by necessity restrict neighboring landowners’ right to exclude.

311. *Id.* at 77.

312. *Id.* at 88. As the Supreme Court has stated more generally: “The more an owner, for his advantage, opens up his property for use by the public in general, the more do his rights become circumscribed by the statutory and constitutional rights of those who use it.” *Marsh v. Alabama*, 326 U.S. 501, 506 (1946) (considering a “company town” that resembled a typical town except that it was owned by a company).

313. *Robins v. Pruneyard Shopping Ctr.*, 592 P.2d 341, 347 (Cal. 1979). The court further noted that “[s]hopping centers to which the public is invited can provide an essential and invaluable forum for exercising [speech and petition] rights.” *Id.*

The New Jersey Supreme Court provided another example of a free speech limit on the right to exclude in *New Jersey Coalition Against War in the Middle East*, 650 A.2d at 757. In that case, the court upheld the right to distribute leaflets at a shopping center, finding that a substantial free speech interest outweighed the mall operators’ private property interests, especially in light of “the practically unlimited permitted public uses found and encouraged on the[] property.” *Id.* at 776.

But see, e.g., *Pac. Gas & Elec. Co. v. Pub. Utils. Comm’n*, 475 U.S. 1, 11 (1986) (finding that a utility was not required to place newsletters of third parties in its billing envelopes); *Miami Herald Publ’g Co. v. Tornillo*, 418 U.S. 241, 258 (1974) (finding that a state statute granting political candidates the right to equal newspaper space to respond to newspapers’ criticism and attacks on their records violated the First Amendment guarantee of a free press).

314. *See* 4 POWELL ON REAL PROPERTY, *supra* note 228, § 34.07[1], at 34-47 to 34-48 (noting that without a right of access, the portion of inaccessible land “would have little use, save by helicopter”).

315. *Traders, Inc. v. Bartholomew*, 459 A.2d 974, 978 (Vt. 1983) (quoting 2 THOMPSON ON REAL PROPERTY § 362, at 382 (Thomas Michie ed., 1980)). Easements by necessity also promote the development of land. *See supra* note 230 and accompanying text.

Although the government's power of eminent domain garners most of the attention on this doctrine,³¹⁶ states have long recognized powers of *private eminent domain*. From the start of the republic, they have granted milling companies the right to flood private lands to provide important services³¹⁷ and have allowed those seeking to build water-powered grist mills to obtain private land for construction.³¹⁸

States also exercise control over public land pursuant to the *public trust* doctrine, which makes them trustees of navigable waters to preserve the public's right to use such waters for commerce, fishing, navigation, and recreational activities.³¹⁹ The doctrine provides rights of access over private property to reach beaches or public waters.³²⁰ Professor Carol Rose offers an additional axis of necessity in explaining that public access to the waterways and roads increases interaction among people, which promotes sociability,

316. This concept is explored in notes 327–30 and accompanying text, *infra*.

317. Dale A. Nance, *Guidance Rules and Enforcement Rules: A Better View of the Cathedral*, 83 VA. L. REV. 837, 894 n.173 (1997).

318. John F. Hart, *Property Rights, Costs, and Welfare: Delaware Water Mill Legislation, 1719–1859*, 27 J. LEGAL STUD. 455, 456 (1998). On other occasions, private entities such as canal and railroad companies have taken rights of way in others' land. *See, e.g.*, Harry N. Scheiber, *Property Law, Expropriation, and Resource Allocation by Government: The United States, 1789–1910*, 33 J. ECON. HIST. 232, 237 (1973) (“[D]evolution of eminent domain power upon . . . canal[] and railroad companies was done in every state.”). And in some western states, owners of landlocked land can condemn an easement across neighboring land. *See, e.g.*, Siemsen v. Davis, 998 P.2d 1084, 1085 (Ariz. Ct. App. 2000) (“[A] landlocked private landowner [can] condemn a ‘private way of necessity’ across lands of another upon showing a ‘reasonable necessity.’”); L & M Prof'l Consultants, Inc. v. Ferreira, 194 Cal. Rptr. 695, 699 (Ct. App. 1983) (praising a legislative decision to allow “private condemnation authority to owners of private property for the limited purpose of . . . provid[ing] utility service to their property”); Shields v. Garrison, 957 P.2d 805, 806 (Wash. Ct. App. 1998) (granting a landlocked owner a way of necessity over an undeveloped piece of land).

319. 9 POWELL ON REAL PROPERTY, *supra* note 228, § 64A.04[3][g], at 64A-42; *see also* Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 475–78 (1970) (outlining the history and rationale of the doctrine). These interests are deemed to be so important to the public that “their free availability tends to mark the society as one of citizens rather than of serfs.” *Id.* at 484. Courts have also applied the doctrine to wildlife, marshlands, historical areas, cemeteries, and archeological sites. *See* Maureen Ryan, *Cyberspace as Public Space: A Public Trust Paradigm for Copyright in a Digital World*, 79 OR. L. REV. 647, 698 (2000) (citing cases).

320. *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 368–69 (N.J. 1984) (finding that the public needed to traverse the dry sand area to reach the ocean and that the enjoyment of the dry area was an integral aspect of the beach experience); 9 POWELL ON REAL PROPERTY, *supra* note 228, § 64A.04[3][g], at 64A-42. The area traditionally protected for the public stretched from the ocean to the high-tide line (or wet sand area) of the beach, with recent cases extending the doctrine to the dry sand area. *SPRANKLING*, *supra* note 227, § 30.05(A)–(B), at 491.

democratic values, and commerce.³²¹ In short, the public trust doctrine limits the right to exclude for commerce and recreation—purposes central to the nation’s economy and, perhaps, to its democracy.

2. *Right to Transfer: Market Inalienability, Eminent Domain.* *Market inalienability* refers to items that cannot be sold but can be given away.³²² Preventing the exploitation of the poor and the depletion of resources are two justifications for the concept.³²³ For example, the National Organ Transplant Act criminalizes the transfer of human organs for valuable consideration³²⁴ under the theory that “those who choose to sell an organ are victims of a particularly pernicious form of exploitation.”³²⁵ Preventing depletion is the objective of state laws that prohibit the hunting of endangered species for profit.³²⁶

321. Rose, *supra* note 93, at 770; *see id.* at 776 (stating that commerce “inculcates rules, understandings, and standards of behavior enforced by reciprocity of advantage); *id.* at 779 (commenting that recreation areas encourage “rich and poor . . . [to] mingle . . . and [to] learn to treat each other as neighbors”).

322. Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1853 (1987). The concept also has been called “modified inalienability.” Susan Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931, 935 (1985).

323. Other justifications for the prohibition on sale include (1) promoting a conception of “human flourishing” in the context of personhood, Radin, *supra* note 322, at 1904; (2) achieving distributional goals, Rose-Ackerman, *supra* note 322, at 960–61; (3) promoting citizenship, *id.* at 961–68; and (4) maintaining quality control, RICHARD TITMUS, *THE GIFT RELATIONSHIP: FROM HUMAN BLOOD TO SOCIAL POLICY* 206, 209 (Ann Oakley & John Ashton eds., 1997).

Scholars have applied the concept of market inalienability to human blood based on a “quality control” rationale and evidence that hepatitis rates from blood transfusions are significantly lower for donated blood than for purchased blood. *Id.* at 209. There are several reasons supporting market inalienability in this context. For starters, individuals know their health history, including incidence of hepatitis, whereas hospitals do not. Rose-Ackerman, *supra* note 322, at 946. Moreover, paying people to give blood creates incentives to hide damaging information and may encourage additional risks, such as supplying blood too frequently. *Id.* Finally, limiting the giving of blood to altruistic contexts may dissuade those who have had hepatitis and may consequently attract healthier donors. *Id.*; Emanuel D. Thorne, *When Private Parts Are Made Public Goods: The Economics of Market-Inalienability*, 15 YALE J. ON REG. 149, 152 (1998).

324. 42 U.S.C. § 274e (2000).

325. John Lawrence Hill, *Exploitation*, 79 CORNELL L. REV. 631, 646–47 (1994).

326. For example, New York prohibits the sale of any “part of the skin or body” of a wide variety of animals, N.Y. ENVTL. CONSERV. LAW. § 11–0536(2)(a) (West 2003); Wisconsin makes it unlawful to sell any “wild animal or its carcass during the closed season for that wild animal.” WIS. STAT. ANN. § 29.539(1) (West 2003); and Texas prevents the sale of oysters and any “fish taken from the public fresh water of the state,” TEX. PARKS & WILD. CODE ANN. § 66.111 (West 2003). *See also* Rose-Ackerman, *supra* note 322, at 943 (discussing “modified inalienability,” a concept allowing gifts but not sales of body parts). This rationale also is

An additional necessity-based limit on the right to transfer is the power of *eminent domain*, pursuant to which landowners must transfer their interests to the government.³²⁷ An essential element of sovereignty, eminent domain allows states to appropriate private property to promote society's general welfare.³²⁸ Historically, the government employed this power only for purposes such as military bases, post offices, highways, parks, and schools. Recently, however, the government has invoked eminent domain for urban renewal, land redistribution, and commercial, industrial, and housing development.³²⁹ Eminent domain allows the government to avoid potential holdups by landowners and acquire property that it needs to perform governmental functions.³³⁰

3. *Right to Use: Takings, Regulation, Lateral Support.* Landowners' right to use their property yields to necessity-based limits in the form of governmental actions and regulations. This issue often arises in the area of *takings* jurisprudence.³³¹ Takings law determines the point at which government restrictions so interfere

consistent with the development limit discussion above, *see supra* notes 233–34 and accompanying text.

327. 9 THOMPSON ON REAL PROPERTY, *supra* note 226, § 80.01(a), at 277; *see also, e.g.*, Jed Rubenfeld, *Usings*, 102 YALE L.J. 1077, 1081 (1993) (stating that the government can “seize private property, dispossess its owner, and assume full legal right and title to it”).

328. 9 THOMPSON ON REAL PROPERTY, *supra* note 226, § 80.01(b)(1)–(2), at 283–84.

329. SPRANKLING, *supra* note 227, § 39.01, at 640; Wendell E. Pritchett, *The “Public Menace” of Blight: Urban Renewal and the Private Uses of Eminent Domain*, 21 YALE L. & POL'Y REV. 1, 48 (2003). The power of eminent domain today has been viewed as “practically limitless.” *Id.* at 2; *see id.* (“Legal scholars from perspectives as diverse as Richard Epstein, Bruce Ackerman, and Margaret Radin today view the Public Use Clause as moribund and argue that government powers of eminent domain are practically limitless.”).

The requirement of “public use” overlaps with the limit of necessity: taking property for public use is consistent with the societally (as determined by democratically elected bodies) necessary use of the land. Although the requirement has been diluted in recent years, *see Haw. Hous. Auth. v. Midkiff*, 467 U.S. 229, 233–34 (1984) (providing an expansive definition of public use), the recent case of *County of Wayne v. Hathcock*, 684 N.W.2d 765 (Mich. 2004), promises to restore some teeth to the standard. In *Hathcock*, the Michigan Supreme Court reversed one of the broadest applications of public use, *Poletown Neighborhood Council v. City of Detroit*, 304 N.W.2d 455 (Mich. 1981), in which the court had upheld Detroit's condemnation of land that displaced more than one thousand buildings and four thousand residents in a residential neighborhood for the purpose of constructing a plant for General Motors, *id.* at 459. In addition to criticizing the expansive reach of *Poletown*, the *Hathcock* court fortified the necessity aspect of eminent domain by incorporating it into an acceptable justification for public use: “‘public necessity of the extreme sort’ [that] requires collective action.” *Hathcock*, 684 N.W.2d at 783.

330. 9 THOMPSON ON REAL PROPERTY, *supra* note 226, § 80.01(b)(2), at 284.

331. The Fifth Amendment provides: “[N]or shall private property be taken for public use, without just compensation.” U.S. CONST. amend V.

with private owners' use of land that the land is effectively "taken" from owners and the government must pay "just compensation."³³² Although takings doctrine presents one of the thorniest areas of property law, it serves the purposes of this Article merely in illustrating limits that apply to the right to use property.

Even *government regulations* that do not reach the level of takings restrict owners' use of property. The range of conceivable regulations is all-encompassing: safety, fire, health, and building codes; zoning ordinances; wetlands, shorelands, and greenbelt ordinances; clean air and water acts; growth control ordinances; and historic protection zones, to name just a few.³³³

Another necessity-based limitation on the right to use is the obligation of *lateral support* that neighbors owe to each other. The doctrine of lateral support grants landowners "the right to be free from the collapse of [their] land caused by the excavations of [their] neighbors' land."³³⁴ Heightening this obligation is the need to provide artificial support³³⁵ and the application of the obligation to successive owners of excavated land.³³⁶ In preventing the collapse of dwellings,

332. Courts employ various tests on this score, ranging from bright-line tests of (1) a "permanent physical occupation" of land, *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 426 (1982), (2) the loss of "all economically beneficial or productive use of land" (unless justified by background principles of property or nuisance law), *Lucas v. S. C. Coastal Council*, 505 U.S. 1003, 1015 (1992), and (3) an exaction lacking an "essential nexus" with a legitimate state interest, *Nollan v. Cal. Coastal Comm'n*, 483 U.S. 825, 837 (1987), or "rough proportionality" to the impact of the proposed project, *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994), to balancing tests that consider "[t]he economic impact of the regulation, . . . the extent to which the regulation has interfered with distinct investment-backed expectations . . . [and] the character of the governmental action," *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

333. *STOEBUCK & WHITMAN*, *supra* note 242, § 9.1, at 518.

334. Myrl L. Duncan, *Reconceiving the Bundle of Sticks: Land as a Community-Based Resource*, 32 ENVTL. LAW 773, 800 (2002) (citing 9 POWELL ON REAL PROPERTY, *supra* note 228, § 63.01); see *McKamy v. Bonanza Sirloin Pit, Inc.*, 237 N.W.2d 865, 866 (Neb. 1976) (explaining that the right of lateral support in land is "based on the proposition that in a state of nature all land is held together and supported by adjacent lands through operation of forces of nature" (quoting 2 C.J.S. *Adjoining Landowners* § 9)).

335. *E.g.*, *Keck v. Longoria*, 771 S.W.2d 808, 810 (Ark. Ct. App. 1989) ("It is [the landowner's] duty to provide an artificial support if the conditions so require."); *Franc v. Bethel Holding Co.*, 807 A.2d 519, 540 (Conn. App. Ct. 2002) (stating that an adjoining owner who excavates so near to a neighbor's land that the soil is threatened "must support it by artificial means").

336. See *Gorton v. Schofield*, 41 N.E.2d 12, 15 (Mass. 1942) ("[T]he burden of providing lateral support to . . . land in its natural condition is one of continued support running against the servient land.").

the doctrine of lateral support demonstrates an obvious necessity-based limit on the right to use land.

C. Equity

In addition to necessity- and development-based defenses, notions of fairness grouped under the heading “equity” operate as defenses in many areas of property law.³³⁷ The right to exclude is limited by the laws on encroachments, good faith improvers, boundary line disputes, bona fide purchasers, and public accommodations. The right to transfer is cabined by recording statutes, notice requirements, the Statute of Frauds, the law on fraudulent transfers, retaliatory eviction, accession, racial covenants, antidiscrimination laws, and limits on caveat emptor. The right to use is restricted by laws on nuisance, irrevocable licenses, easements, and use by landlords.

1. *Right to Exclude: Encroachments, Good Faith Improvers, Boundary Line Disputes, Bona Fide Purchasers, Public Accommodations.* The law of *encroachments* limits the right to exclude by precluding the issuance of an injunction when parts of buildings or other structures intrude onto others’ lands.³³⁸ In particular, modern courts will not enjoin encroachments that are minimal, that would be costly to remove, and that result from innocent mistakes.³³⁹ For example, a court refused to issue an injunction when a high-rise parking garage encroached a total of 1.3 square feet onto the plaintiff’s property and reduced the property’s

337. The designation “equity” has a historical basis: formalism led to the creation of courts of equity, which played an important role in ensuring individually fair results in many property cases.

338. This exception to the right to exclude also serves the development interest in not wasting resources by not requiring the removal of substantial construction. SINGER, *supra* note 232, § 2.4.1, at 41.

339. Richard R.W. Brooks, *The Relative Burden of Determining Property Rules and Liability Rules: Broken Elevators in the Cathedral*, 97 NW. U. L. REV. 267, 314 (2002); Olivia Leigh Weeks, Comment, *Much Ado About Mighty Little—North Carolina and the Application of the Relative Hardship Doctrine to Encroachments of Permanent Structures on the Property of Another*, 12 CAMPBELL L. REV. 71, 74–77 (1989). Neither the minimal nature of the encroachment nor the substantial cost of removal kept early common law courts from issuing injunctions requiring the removal of the encroachment. See, e.g., *Geragosian v. Union Realty Co.*, 193 N.E. 726, 726–28 (Mass. 1935) (finding an eleven-inch overhang and an underground drain to constitute trespass and imposing an injunction on the grounds that “[a] particular piece of real estate cannot be replaced by any sum of money, however large”).

market value by two hundred dollars, but would have cost five hundred thousand dollars to remove.³⁴⁰

Related to the encroachment concept is the relief that most states today afford to *good faith improvers*. Common law courts treated those who mistakenly built on others' land as trespassers not entitled to any of the value of their improvements.³⁴¹ But various states today, finding it unfair for landowners to reap the benefit of an improver's work, require landowners either to sell their land to the improver or pay the improver the value of the improvements.³⁴² Like the laws on encroachments, the laws on good faith improvers illustrate (to apply the Calabresi-Melamed framework) the replacement of property rules with liability rules.³⁴³

Boundary line disputes constitute another related limit. When one owner misrepresents the location of a boundary between two tracts of land, and a neighbor reasonably relies on this misrepresentation, the owner is estopped from challenging the represented boundary.³⁴⁴

340. *Urban Site Venture II Ltd. v. Levering Assocs. Ltd.*, 665 A.2d 1062, 1063 (Md. 1995). The court followed its "accepted rule" that a court should balance the need for an injunction against the harm to a defendant if an "occupation does no damage to the complainant except the mere occupancy of a comparatively insignificant part of his lot." *Id.* at 1065 (quoting *Easter v. Dundalk Holding Co.*, 86 A.2d 404, 405 (Md. 1952)); *see also, e.g.*, *Terwelp v. Sass*, 443 N.E.2d 804, 808 (Ill. App. Ct. 1982) (stating that "courts will ordinarily refuse to grant injunctive relief" when the removal cost is high and the corresponding benefit is low); *Generalow v. Steinberger*, 517 N.Y.S.2d 22, 23 (App. Div. 1987) (refusing to award the plaintiff the "drastic remedy of a mandatory injunction" requiring the defendants to remove a structure that encroached less than two feet onto the plaintiff's property because "the harm to the defendants in removing the wall would outweigh any corresponding benefit to the plaintiff"); *Christopher v. Rosse*, 458 N.Y.S.2d 8, 9-10 (App. Div. 1982) (observing that the "drastic remedy of an injunction" was unwarranted given the innocent nature of the defendant's encroachment); *Cross v. McCurry*, 859 S.W.2d 349, 354 (Tenn. Ct. App. 1993) (upholding the trial court's decision to award damages in place of an injunction as "the appropriate equitable relief").

341. *See* John G. Sprankling, *The Antiwilderness Bias in American Property Law*, 63 U. CHI. L. REV. 519, 544 (1996) ("Eighteenth-century English law afforded little protection to the mistaken improver of land.").

342. Kelvin H. Dickinson, *Mistaken Improvers of Real Estate*, 64 N.C. L. REV. 37, 44-45 (1985). Other courts permit the improver to remove the improvement. *E.g.*, *Shick v. Dearmore*, 442 S.W.2d 198, 199-201 (Ark. 1969) (reasoning that the common law approach is inequitable when the improvement can be removed without damage to the land).

343. *See* Calabresi & Melamed, *supra* note 274, at 1115-24. Other examples of liability rules are provided by the laws of nuisance, eminent domain, and takings. *See supra* notes 274, 293.

344. 9 POWELL, *supra* note 228, § 68.04, at 68-17 to 68-21; Stewart E. Sterk, *Estoppel in Property Law*, 77 NEB. L. REV. 756, 788-89 (1998).

Another fairness exception involves *BFPs*.³⁴⁵ Because BFPs pay valuable consideration for goods to which they honestly believe that sellers hold valid title,³⁴⁶ they possess a strong equitable claim to title. Although neither BFPs nor owners fraudulently induced to sell are “blameworthy” per se, BFPs have a more compelling claim to title because they—in contrast to owners, who may have been able to avoid the fraud by being more careful—typically could not have avoided deception by undertaking additional precautions.³⁴⁷

Finally, equity-based limitations on the right to exclude take the form of *antidiscrimination* rules. *Public accommodations*, facilities that are open to the public and hold themselves out as ready to serve the public, cannot exclude people based on categories such as race, religion, or disability.³⁴⁸ In recent years, the scope of public accommodations has expanded beyond the traditional categories of innkeepers (including hotels and motels), common carriers (including trains, ships, and taxis), and, to a lesser extent, places of entertainment and hospitals.³⁴⁹

2. *Right to Transfer: Recording Statutes, Notice, Fraud, Retaliatory Eviction, Accession, Racial Covenants, Antidiscrimination Statutes, Limits on Caveat Emptor.* Equity-based limits on the right to

345. For a discussion of the role of the doctrine in promoting development in the form of a robust commercial marketplace, see *supra* notes 240–41 and accompanying text.

346. U.C.C. § 8-303 (2002); see *id.* § 8-303 cmt. 4 (noting that “bona fide purchaser” has been replaced with “protected purchaser” in the latest version of the U.C.C.); Ronald H. Rosenberg, *The Ultimate Independence of the Federal Courts: Defying the Supreme Court in the Exercise of Federal Common Law Powers*, 36 CONN. L. REV. 425, 463 n.219 (2004) (characterizing the bona fide purchaser rule as “provid[ing] that one who in good faith pays reasonable value for assets takes such assets free of creditors’ claims”).

347. Karen Theresa Burke, Comment, *International Transfers of Stolen Cultural Property: Should Thieves Continue to Benefit from Domestic Laws Favoring Bona Fide Purchasers?*, 13 LOY. L.A. INT’L & COMP. L. REV. 427, 444 (1990).

348. See generally Civil Rights Act of 1964, §§ 42 U.S.C. 2000e to 2000e-17 (2000); Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12,101–12,213 (2000).

349. See *Doe v. Bridgeton Hosp. Ass’n*, 366 A.2d 641, 646 (N.J. 1976) (recognizing the hospital’s “quasi-public status . . . and its obligation to serve the public”). The Civil Rights Act of 1964 prohibits discrimination in inns, restaurants, gas stations, and places of entertainment. 42 U.S.C. § 2000a(b)(1)–(4). The Americans with Disabilities Act, 42 U.S.C. §§ 12,101–12,213, extends “public accommodations” to restaurants, theaters, retail stores, banks, barber shops, doctors’ and lawyers’ offices, museums, parks, educational institutions, day care centers, and other locations. *Id.* § 12,181(7). In addition, nearly all states (with the exceptions of Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Texas) have statutes prohibiting racial discrimination in retail stores. Joseph William Singer, *No Right to Exclude: Public Accommodations and Private Property*, 90 NW. U. L. REV. 1283, 1290 (1996).

transfer curb (1) the decision to transfer (through recording statutes, notice requirements, the Statute of Frauds, and the laws of fraudulent transfers, retaliatory eviction, and accession), (2) the selection of transferees (racial covenants, antidiscrimination legislation), and (3) the conditions of transfer (limits on caveat emptor).

Nearly all states have *recording statutes* that protect BFPs who buy without notice of another's person's interest.³⁵⁰ Requiring notice promotes fairness by not saddling purchasers with interests that they could not easily have discovered.³⁵¹ Courts also have woven *notice* limits into the case law requirements touching issues including (1) the burdens of equitable servitudes running to successors,³⁵² (2) continuity for easements implied from prior existing use,³⁵³ and (3) open and notorious use for adverse possession and easements by prescription.³⁵⁴

The *Statute of Frauds* requires that contracts for the sale of real property be in writing. In particular, it invalidates contracts that do not include the essential terms of sale³⁵⁵ in a writing signed by the party against whom enforcement is sought.³⁵⁶ As the doctrine's name suggests, one of the primary justifications for invalidating transfers not compliant with the Statute of Frauds is to prevent fraud.³⁵⁷

Similarly, the Uniform Fraudulent Transfer Act³⁵⁸ protects unsecured creditors against actions hindering their collection of claims.³⁵⁹ In particular, it targets *fraudulent transfers* that occur "when

350. See *supra* notes 242–43 and accompanying text. Notice takes three forms: (1) actual notice (knowledge of a prior interest), (2) constructive notice (resulting from a search of the public records), and (3) inquiry notice (based on a duty to investigate suspicious circumstances). 11 THOMPSON ON REAL PROPERTY, *supra* note 226, § 92.15, at 164.

351. Notice also reduces fraud and allocates loss to the party better able to avoid it. SPRANKLING, *supra* note 227, § 24.09, at 390.

352. See *Sanborn v. McLean*, 206 N.W. 496, 498 (Mich. 1925) (presuming inquiry notice based on the uniform residential character of a neighborhood); *Tulk v. Moxhay*, 41 Eng. Rep. 1143, 1143 (Ch. 1848) (requiring notice as an element of equitable servitudes).

353. See 7 THOMPSON ON REAL PROPERTY, *supra* note 226, § 60.03(b)(4)(i), at 427–28.

354. See Gerald Korngold, PRIVATE LAND USE ARRANGEMENTS §3.23, at 81 (1990) (stating that the various doctrinal requirements for easements by prescription "are all designed for one purpose, i.e., to give notice to the owner").

355. 14 POWELL ON REAL PROPERTY, *supra* note 228, § 81A.02[1], at 81A-16. The essential terms of the contract include the identity of the parties, a description of the land, and the purchase price. *Id.* § 81A.02[2], at 81A-17 to 81A-18.

356. U.C.C. § 2-201 (2002).

357. Eric A. Posner, *Norms, Formalities, and the Statute of Frauds: A Comment*, 144 U. PA. L. REV. 1971, 1977 (1996) (explaining that the Statute of Frauds makes fraud more difficult).

358. UNIF. FRAUDULENT TRANSFER ACT, 7A U.L.A. 639 (1984).

359. *Id.* § 1 cmt. 2 ("This Act . . . declares rights and provides remedies for unsecured creditors against transfers that impede them in the collection of their claims."), *available at*

a debtor intends to hinder, delay, or defraud a creditor, or transfers property under certain conditions . . . without receiving reasonably equivalent value in return.”³⁶⁰ In targeting such transfers, the Act represents an equity-based limit on a debtor’s right to transfer.

With respect to landlords’ right to transfer, there is an equity-based limit inherent in the doctrine of *retaliatory eviction*. This doctrine prohibits landlords from evicting tenants who assert rights protected by the implied warranty of habitability.³⁶¹

Another equity-based limit on the right to transfer is the law of *accession*, by which improvers who add labor and materials to others’ property sometimes gain title. Improvers acquire title to property when their labor transforms the property or significantly increases its original value.³⁶² Because accession mandates transfer to improvers for reasons of fairness and irrespective of what original owners might desire, it represents an equity-based limit on the right to transfer.

Another example of such a limit is courts’ refusal to enforce *racial covenants*, which advances social justice and inhibits segregation. In the seminal case of *Shelley v. Kraemer*,³⁶³ the Supreme Court prohibited judicial enforcement of racial covenants, holding that such enforcement violated the Equal Protection Clause of the Fourteenth Amendment.³⁶⁴ This constitutes an equity-based limit to

<http://www.law.upenn.edu/bll/ulc/fnact99/1980s/ufta84.htm>. As of 2004, forty-one states and the District of Columbia follow the Act. Nat’l Conference of Comm’rs on Unif. State Laws, A Few Facts About the Uniform Fraudulent Transfer Act, at http://www.nccusl.org/Update/uniformact_factsheets/uniformacts-fs-ufta.asp (last visited Oct. 5, 2004) (on file with the *Duke Law Journal*).

360. *McCain Foods USA, Inc. v. Cent. Processors, Inc.*, 61 P.3d 68, 75 (Kan. 2002).

361. *Edwards v. Habib*, 397 F.2d 687, 699 (D.C. Cir. 1968); UNIF. RESIDENTIAL LANDLORD & TENANT ACT § 5.101 (1972), 7B U.L.A. 503 (1985). As of 2004, twenty states have enacted statutes based on the Uniform Residential Landlord and Tenant Act. Nat’l Conference of Comm’rs on Unif. State Laws, A Few Facts About the Uniform Residential Landlord and Tenant Act, at http://www.nccusl.org/Update/uniformact_factsheets/uniformacts-fs-urfta.asp (last visited Oct. 17, 2004) (on file with the *Duke Law Journal*).

362. Jay L. Koh, *From Hoops to Hard Drives: An Accession Law Approach to the Inevitable Misappropriation of Trade Secrets*, 48 AM. U. L. REV. 271, 328 (1998).

363. 334 U.S. 1 (1948).

364. Judicial enforcement of the covenant constituted state action because, “but for the active intervention of the state courts, . . . petitioners would have been free to occupy the properties in question.” 334 U.S. at 19. In particular, “the States have made available . . . the full coercive power of government to deny to petitioners, on the grounds of race or color, the enjoyment of property rights in premises which petitioners are willing and financially able to acquire and which the grantors are willing to sell.” *Id.* Courts have applied the reasoning of *Shelley v. Kraemer* to racial discrimination but have not extended it to other forms of

the right to transfer because it denies owners the right to refuse to transfer property for reasons relating to a person's race.

Antidiscrimination statutes provide another, related example. The Fair Housing Act (Title VIII of the Civil Rights Act of 1968)³⁶⁵ prohibits the refusal to sell or rent a dwelling³⁶⁶ on the grounds of "race, color, religion, sex, familial status, or national origin."³⁶⁷ The Civil Rights Act of 1866³⁶⁸ provides that all United States citizens "shall have the same right . . . as is enjoyed by white citizens . . . to inherit, purchase, lease, sell, hold, and convey real and personal property."³⁶⁹ And states have provided additional protection, barring discrimination based on marital status or sexual orientation.³⁷⁰

The decline of the doctrine of *caveat emptor* ("let the buyer beware") constitutes an equity-based limit affecting the conditions of transfer. Early common law courts provided few protections to buyers of real property—for example, sellers were not required to disclose latent defects to buyers.³⁷¹ But in the past fifty years, the doctrine of *caveat emptor* has given way—at least for residential premises—to requirements that sellers disclose latent defects, a development consistent with "justice, equity, and fair dealing."³⁷² The decline of *caveat emptor* restricts sellers' freedom to transfer property.

discrimination. *See, e.g.*, *Ginsberg v. Yeshiva of Far Rockaway*, 358 N.Y.S.2d 477, 482 (App. Div. 1974) (refusing to extend *Shelley* to religiously restrictive covenants).

365. 42 U.S.C. §§ 3601–3619 (2000).

366. There are two types of property exempted from the definition of "dwelling": a "single-family house sold or rented by an owner" and an owner-occupied building "occupied by no more than four families living independently of each other." *Id.* § 3603(b)(1)–(2).

367. *Id.* § 3604(a). Additional limits on the right to transfer prohibit discrimination in (1) the "terms, conditions, or privileges of sale or rental"; (2) advertisements relating to the dwelling; and (3) representations as to the availability of the dwelling. *Id.* § 3604(b)–(d).

368. 42 U.S.C. § 1981–1982 (2000).

369. *Id.* § 1982.

370. *See, e.g.*, *Smith v. Fair Employment & Hous. Comm'n*, 913 P.2d 909, 918 (Cal. 1996) (marital status); *Poff v. Caro*, 549 A.2d 900, 904 (N.J. Super. Ct. Law Div. 1987) (sexual orientation); *Braschi v. Stahl Assocs.*, 543 N.E.2d 49, 55 (N.Y. 1989) (same).

371. Michael Madison, *The Real Properties of Contract Law*, 82 B.U. L. REV. 405, 413 (2002); Howard R. Fine, Note, *The Implied Warranty of Habitability in the Sale of New Homes: Disclaiming Liability in Illinois*, 1987 U. ILL. L. REV. 649, 649–50.

372. *Johnson v. Davis*, 480 So. 2d 625, 628 (Fla. 1985). The transformation also recognizes the relative bargaining power of consumers and manufacturers. Jeffrey Piampiano, Comment, *Coastal Erosion and the Risk of Liability for Coastal Land Developers*, 4 J. SMALL & EMERGING BUS. L. 347, 364 (2000).

3. *Right to Use: Nuisance, Irrevocable Licenses, Easements, Landlords.* In addition to supporting the development of land,³⁷³ certain elements of *nuisance* law implicate notions of fairness in the context of the right to use. In particular, courts weigh the gravity of harm against the utility of the conduct³⁷⁴ to determine what nuisances landowners must suffer. An alternative nuisance analysis does not even consider the utility of conduct, examining only whether “the harm resulting from [an] invasion is severe and greater than . . . [complainants] should be required to bear without compensation.”³⁷⁵

Irrevocable licenses are another example of equity limits on the right to use. One reason for irrevocability is to foster development,³⁷⁶ but an equally strong reason lies in equity: it is unfair to allow licensors to revoke licenses after licensees substantially rely on them to their detriment.³⁷⁷ In many cases, licensees undertake significant expenditures improving the premises, not anticipating that owners will revoke their licenses.³⁷⁸

Additionally, the law of *easements* demonstrates at least two equity-based limits on the right to use land. First, an easement cannot be subdivided if such action would lead to an unreasonable increase in the burden on the servient estate.³⁷⁹ Second, the location of an

373. See *supra* notes 274–83 and accompanying text.

374. In determining the gravity of the harm, courts consider the extent and character of the harm, the social value of the use invaded, the suitability of the use to the character of the locality, and the burden of avoiding the harm. RESTATEMENT (SECOND) OF TORTS § 827 (1977).

375. *Id.* § 829A.

376. See *supra* notes 284–86 and accompanying text.

377. SPRANKLING, *supra* note 227, § 32.07(C), at 526; 8 THOMPSON ON REAL PROPERTY, *supra* note 226, § 64.03(b), at 11.

378. 8 THOMPSON ON REAL PROPERTY, *supra* note 226, § 64.03(b), at 11. In *Holbrook v. Taylor*, 532 S.W.2d 763 (Ky. 1976), for example, the licensee maintained and repaired a roadway, and built a \$25,000 house, all with the knowledge of the licensor. *Id.* at 766; see also, e.g., *McCoy v. Hoffman*, 295 S.W.2d 560, 561 (Ky. 1956) (“[W]here the licensee has . . . erected improvements or made substantial expenditures on the faith or strength of the license, it becomes irrevocable and continues for so long a time as the nature of the license calls for.”); *Lashley Tel. Co. v. Durbin*, 228 S.W. 423, 423 (Ky. 1921) (stating that when the license “includes the right to erect structures and acquire an interest in the land in the nature of an easement . . . , the licensor may not revoke the license and restore his premises to their former condition after the licensee has . . . erected the improvements at considerable expense”). Making licenses irrevocable limits licensors’ right to use property by imposing permanent restrictions on such use.

379. *Boudreau v. Coleman*, 564 N.E.2d 1, 7 (Mass. App. Ct. 1990); RESTATEMENT (THIRD) OF PROPERTY: SERVITUDES § 5.7 (2000); 7 THOMPSON ON REAL PROPERTY, *supra* note 226, § 60.04(a)(1)(iii), at 453.

easement can be changed only (1) by mutual agreement of the relevant parties (under the common law rule³⁸⁰) or (2) if changing the location does not increase the burdens on the easement owner (under the recent Restatement rule).³⁸¹ These rules limit owners' ability to alter the characteristics of easements.

A final example of an equity-based limit on the right to transfer—the limit on a landlord's "use"—differs from the other examples discussed in this Section; for starters, it does not affect possession. But landlords' duties to tenants are analogous to the use of land, as revealed in three doctrines. First, under the "English" rule, which a majority of American jurisdictions now follow, landlords at the beginning of a tenancy must provide not only a legal right to possession but also actual possession; providing actual possession accords with the tenant's expectations and the landlord's ability to remove holdover tenants.³⁸² Second, the condition of the premises provided must meet minimum standards of fairness—in particular, not violating an "implied warranty of habitability."³⁸³ Third, when seeking to recover rent from a tenant who abandons the premises, landlords must mitigate damages by making an effort to find a substitute tenant, a requirement that is consistent with "modern notions of fairness and equity."³⁸⁴

D. Matrix of Property Limits

The following chart summarizes the foregoing development-, necessity-, and equity-based limits that restrict the rights to exclude, transfer, and use.

380. *Davis v. Bruk*, 411 A.2d 660, 664 (Me. 1980).

381. RESTATEMENT (THIRD) OF PROPERTY: SERVITUDES § 4.8 cmt. f (allowing a servient owner to change the location of an easement if the change does not "significantly lessen the utility of the easement, increase the burdens on the holder of the easement benefit, or frustrate the purpose for which the easement was created"); *DUKEMINIER & KRIER*, *supra* note 249, at 842–43 (collecting cases applying the Restatement approach).

382. 2 POWELL ON REAL PROPERTY, *supra* note 228, § 16B.02[1][a], at 16B-12 to 16B-14; 5 THOMPSON ON REAL PROPERTY, *supra* note 226, § 40.22(b)(1), at 135–36.

383. 2 POWELL ON REAL PROPERTY, *supra* note 228, § 16B.04[2], at 16B-47.

384. *Sommer v. Kridel*, 378 A.2d 767, 773 (N.J. 1977). *See generally* 2 POWELL ON REAL PROPERTY, *supra* note 228, § 17.05[2], at 17-66 (asserting that a majority of states now impose a duty to mitigate damages); Stephanie G. Flynn, *Duty to Mitigate Damages upon a Tenant's Abandonment*, 34 REAL PROP. PROB. & TR. J. 721, 732 (2000) (noting that twenty-eight states impose a duty to mitigate).

	<i>Right to exclude</i>	<i>Right to transfer</i>	<i>Right to use</i>
<i>Development</i>	Easements <ul style="list-style-type: none"> • Express easements • Implied easements • Easements by necessity • Default ambiguity position Limits on rule of capture <ul style="list-style-type: none"> • Wild animals • Oil and gas • Surface waters • Groundwater Bona fide purchasers	Adverse possession Rule Against Perpetuities Restraints on alienation Tenant's right to transfer <i>Numerus clausus</i>	Zoning Nuisance Licenses Waste Servitudes
<i>Necessity</i>	Imminent necessity Social necessity Free speech Easement by necessity Private eminent domain Public trust	Market inalienability Eminent domain	Takings Regulation Lateral support
<i>Equity</i>	Encroachments Good faith improvers Boundary line disputes Bona fide purchasers Public accommodations	Recording statutes Notice requirements Statute of Frauds Fraudulent transfers Retaliatory eviction Accession Racial covenants Antidiscrimination laws Limits on caveat emptor	Nuisance Licenses Easements Landlord "use"

IV. EXTRAPOLATION OF PROPERTY LIMITS TO INTELLECTUAL PROPERTY

In the first three Parts of this Article, I have demonstrated several principles. First, IP has rapidly been assuming the characteristics of property. Second, limits are at the core of property. Third, limits on IP rights are appropriate not only because of the propertization of the field but also because of the frequent inaccuracy of the traditional story justifying IP and the dangers of IP rights. In short, it is appropriate to extrapolate limits into IP.

Three additional considerations provide further support for the extrapolation of property limits into IP. First, the rationales underlying IP and property overlap to a significant extent. Providing incentives for development is the primary goal of IP and a critical goal of property.³⁸⁵

Second, the dangers of unlimited rights are most apparent in IP. The importance of IP in the commercial marketplace, in a multigenerational path of innovation, and in today's public discourse ensures that an unlimited version of IP threatens monopoly loss, innovation bottlenecks, and diminished speech. These dangers typically are not present (or, at a minimum, are not present to nearly the same degree) in property: in comparison to IP, land is a less direct input into commercial products, less often forms a building block for future generations of development, and less frequently serves as a vehicle for expression.³⁸⁶

Third, if property—with all of its varied rationales—is subject to such a multitude of limits, then certainly IP should be. In addition to serving numerous nonutilitarian purposes, property serves the utilitarian goals of preventing overuse and providing incentives for development. IP, in contrast, only endeavors to promote

385. See *supra* notes 92–95, 120–25 and accompanying text. The varying levels of tangibility of the targets of property and IP law do not negate this overlap in the development rationale. Even if the scope of the right to exclude is broader for IP—because of the nonexclusive and nonrivalrous nature of information—than for property, the need for the exclusion is not so much greater that it can avoid the imposition of limits. In fact, given the questionable need for exclusion across much of IP law, limits are quite appropriate.

386. See also Landes & Posner, *supra* note 51, at 268 (stating that “intellectual property is a particularly costly form of property” and expecting more restrictive limits to apply to IP than to physical property); James Langenfeld, *Intellectual Property and Antitrust: Steps Toward Striking a Balance*, 52 CASE W. RES. L. REV. 91, 93–95 (2001) (distinguishing IP from property by explaining that it offers “[s]ubstantial social benefits . . . [that] spill over into other industries,” requires combination with assets owned by others, and “can have a substantially larger impact than tangible property on competition in any market”).

development.³⁸⁷ Not surprisingly, then, the rights granted by property, even as curbed by limits, historically have been more powerful than IP's confined rights, which apply to narrow subject matter for finite time periods. But the recent expansion of IP rights and the diminution of limits on IP have altered this relationship, erasing IP's subordinate position. Despite its recent expansion, IP is still justified only for the single purpose of providing incentives—with even that purpose subject to serious question in many cases—and so, a bulked-up IP needs limits in a way that its tapered historical version did not. If property, which effectively serves more goals than IP, can offer meaningful limits, then so can IP.³⁸⁸

The extrapolation also avoids pitfalls by taking place at the most appropriate level. Importing limits at the thematic levels of development, necessity, and equity avoids the problems of trying to map particular property doctrines onto IP.³⁸⁹ It also provides guidance as to *how* IP should be limited, in contrast to approaches that impose general “duties” on IP holders without specifying how to determine those duties.³⁹⁰

387. See Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age*, 66 LAW & CONTEMP. PROBS. 89, 90 (Winter/Spring 2003) (explaining the two utilitarian arguments supporting tangible property—(1) “prevent[ing] wasteful overuse of resources and stav[ing] off the much-discussed ‘Tragedy of the Commons’ that often accompanies open access” and (2) “encourag[ing] optimal investment in resource development”—and noting that for intangible products, “the first of these familiar arguments falls away, since there is no physical resource to be ruined by overuse”); cf. Breyer, *supra* note 123, at 288–89 (“Since ideas are infinitely divisible, property rights are not needed to prevent congestion, interference, or strife.”); Lemley, *Justifications*, *supra* note 17, at 130 (criticizing ex post justifications for IP that focus on the management of the work after creation); Mark A. Lemley & Eugene Volokh, *Freedom of Speech and Injunctions in Intellectual Property Cases*, 48 DUKE L.J. 147, 184 (1998) (arguing that “writing graffiti on someone else’s building damages the building owner in a different way than making a copy of a book injures the author,” in particular by “interfer[ing] with the owner’s use of his own property”).

388. Even the imposition of static losses (such as landowners’ inability to use a portion of their land) does not prevent the imposition of limits in property law. Limits applied to IP owners will not cause such static losses (because of the nonrivalrous nature of information), providing an additional justification for limiting IP.

389. See Constance E. Bagley & Gavin Clarkson, *Adverse Possession for Intellectual Property: Adapting an Ancient Concept to Resolve Conflicts Between Antitrust and Intellectual Property Laws in the Information Age*, 16 HARV. J.L. & TECH. 327, 365 (2003) (“Just as adverse possession has potential benefits in the arena of real property, similar benefits could be obtained by applying a variant of this principle to intellectual property.”). Although I do not suggest applying particular property doctrines to IP, I reference doctrines throughout this Part to show some overlapping rationales for limits.

390. Lipton, *supra* note 217, at 140.

Each Section in this Part begins by locating *existing* defenses within the three categories of limits. Although such limits already exist, their placement in an overarching scheme promises to provide structure and predictability to a series of episodic exceptions created by courts.

Most of the existing limits reflect considerations of necessity or equity. Because the utilitarian focus of IP accords with development, it is not surprising that limits on rights most frequently serve other important but unrelated purposes. That is, regardless of how important it is to provide incentives for innovation, the IP case law nevertheless makes room for limits based on speech and estoppel (to pick just two examples).

Fewer development-based limits currently exist. Perhaps this is a consequence of adherence to the traditional story of IP. In other words, if IP protection is believed to promote innovation, then limits on IP rights would generally not be considered consistent with this goal. A critical analysis of the traditional story, however, paves the way for the recognition of new development-based limits. Of course, such proposals must be offered sparingly because they contravene the rights that are supposed to foster development in the first place. But in certain cases, limits may best promote the goal of development.

After presenting the existing limits, I propose new defenses for IP. Some of these defenses currently exist in weak forms. For these, I suggest a *recovered* limit. Other suggestions are original, thus constituting *new* proposals. The limits that I offer are meant to be built upon and developed, and are offered in the spirit of commencing dialogue on the issue. The ultimate delineation and justification of a new limit-based IP paradigm lies beyond the contours of a single article, of course. But it is possible to lay the foundation for such work, as I do in this Part.

Finally, the proposals that I offer do not follow axiomatically from the adoption of a property paradigm. But at least the property framework allows a debate about the appropriate scope of IP. Congressional action has taken potential adjustments to scope or duration off the table. The only option left is to carve limits out of IP's powerful rights.³⁹¹

391. Limiting IP through the property paradigm is most consistent with the utilitarian theory of IP. This theory is the prevailing framework in the United States today, with roots in the Constitution and recognition by numerous courts. *See, e.g., Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 524 (1994) ("The primary objective of the Copyright Act is to encourage the production of

In the remainder of this Part, I proffer existing, recovered, and new limits for copyright, patent, trademark, and right of publicity law.

A. *Copyright Law*

Seven limits based on development, necessity, and equity currently appear, or should be created, in copyright law. Necessity-based limits include exclusions from copyright law, compulsory licenses, and the first sale doctrine. Equitable limits appear in the defenses of copyright misuse, fraud, estoppel, and laches. This Section also offers a new tripartite fair use defense, which adds to the existing productive fair use doctrine the defenses of “necessary” fair use and “equitable” fair use.

original literary, artistic, and musical expression for the good of the public.”); *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) (“The primary objective of copyright is not to reward the labor of authors, but ‘[t]o promote the Progress of Science and useful Arts.’” (alteration in original) (quoting U.S. CONST. art. I, § 8, cl. 8)); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 167 (1989) (highlighting the “patent statute’s careful balance between public right and private monopoly to promote certain creative activity”); *Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966) (“The patent monopoly was not designed to secure to the inventor his natural right in his discoveries,” but rather “was a reward, an inducement, to bring forth new knowledge.”); *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”); *Kendall v. Winsor*, 62 U.S. (21 How.) 322, 327–28 (1858) (“[T]he limited and temporary monopoly granted to inventors was . . . designed . . . [to] benefit . . . the public”); *supra* note 1 and accompanying text. *See generally*, e.g., *Fisher*, *supra* note 183, at 1688 (citing commentators and additional cases)

To be clear, the instrumentalism and tradeoffs at the heart of the Constitution and judicial opinions do not axiomatically implicate current conceptions of utilitarianism. But at least the theory, as it has been applied in recent years, attempts to address the undeniable dangers of excessive protection, in contrast to theories like moral rights and personhood, each of which provides tools that appear to have been advanced primarily to explain the granting, and not the limiting, of rights. *See, e.g.*, *Gordon*, *supra* note 116, at 1549–64 (applying Lockean theory to IP); *Justin Hughes*, *The Philosophy of Intellectual Property*, 77 *GEO. L.J.* 287, 330–365 (1988) (applying personhood theory to IP); *Kwall*, *supra* note 115, at 152–53 (describing moral rights approach). Moreover, I use the utilitarian construct in an attempt to maximize societal welfare rather than the welfare of any particular group such as IP owners.

Admittedly, the utilitarian approach is indeterminate in calculating the optimal shape of protection. *See Machlup*, *supra* note 127, at 79–80 (“No economist, on the basis of present knowledge, could possibly state with certainty that the patent system, as it now operates, confers a net benefit or a net loss upon society.”); *Priest*, *supra* note 126, at 19 (stating that economic analysis of the patent system is “one of the least productive lines of inquiry in all of economic thought”). But its focus on important tradeoffs such as that between providing incentives to innovate and minimizing monopoly and other losses is unique among the current applications of IP theories. To the extent that this project reorganizes and recommends new limits for IP, its focus thus aligns most directly with that of utilitarianism.

1. *Existing Development Limit: Productive Fair Use.* As a result of importing property limits into fair use, I propose a partition of the defense into three categories, which are aligned with development, equity, and necessity. The first category reflects existing doctrine (in particular, transformative use), and the latter two are new. In this Section, I discuss the existing, development-based prong of fair use. In Section A.4, I propose two new prongs based on necessity and equity.³⁹²

Development-based limits, which endeavor to increase the number and type of creative works, appear in two strands of fair use jurisprudence: (1) transformative use and (2) reverse engineering of software. The label “*productive fair use*”³⁹³ brings together these two concepts that foster development, the former altering the original work by adding new expression or offering the work for a new purpose, and the latter increasing the number of products in the software market and circumventing potential bottlenecks.

The first instance of productive use applies when *the use is “transformative,” altering the original or offering the work for a new purpose.* In creating new works, transformative uses promote development.³⁹⁴ Courts currently consider the transformative nature of the use the most important factor in the fair use analysis.

The Supreme Court elevated transformative use to its lofty position in *Campbell v. Acuff-Rose Music, Inc.*³⁹⁵ In upholding the

392. See *infra* Part IV.A.4.

393. For a history of the phrase “productive use”—the antecedent to “transformative use”—in fair use decisions, see Laura G. Lape, *Transforming Fair Use: The Productive Use Factor in Fair Use Doctrine*, 58 ALB. L. REV. 677, 705–12 (1995).

394. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 495 (1984) (Blackmun, J., dissenting) (contending that the primary purpose of the fair use doctrine is “to facilitate the creation of new works” and that “only transformative works will satisfy this purpose”). Although the creation of new works is the most obvious example of promoting development, even similar works offered for new purposes contribute to a robust conception of development. Given the expansion of the concept of transformative use, however, courts must ensure that similar works in fact promote development and perhaps should apply less deference in the rebuttable presumption to uses (such as arrangements or summaries) that do not significantly contribute to development. Finally, there is at least an argument that in some contexts, such as expensive motion pictures, limiting the scope of fair use could facilitate the development of works by original authors.

395. 510 U.S. 569, 579 (1994). The transformative use doctrine can be traced back at least to the Ninth Circuit’s opinion in *Universal City Studios, Inc. v. Sony Corp. of America*, 659 F.2d 963 (9th Cir. 1981), Justice Blackmun’s dissent in *Sony*, 464 U.S. at 457, and a law review article written by Judge Pierre Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105 (1990). See also Lape, *supra* note 393, at 723 (pointing out that, although productive use is not an absolute requirement, “its role has been increasing since the Supreme Court decision in *Sony*”).

application of the fair use defense to a rap parody of a rock-and-roll ballad, the Court asked whether the expression “merely ‘supersede[d] the objects’ of the original creation” or “instead add[ed] something new, with a further purpose or different character, altering the first with new expression, meaning, or message.”³⁹⁶ Creating transformative works, according to the Court, furthers “the goal of copyright, to promote science and the arts.”³⁹⁷ For this reason the Court curtailed the significance of the other fair use factors and placed the primary emphasis on the transformative nature of the work.³⁹⁸ In fact, since *Campbell*, courts’ findings on the transformative nature of the work have been nearly dispositive of the fair use analysis.³⁹⁹

Illustrative activities that constitute transformative use demonstrate the promotion of development: parodies, book reviews, and criticism, for example, all introduce new works markedly different from the original. Moreover, transformative use increases the *types* of works in the marketplace by encouraging critical works that copyright holders would naturally be reluctant to license. In short, courts’ recognition of the transformative fair use defense accords with limits on copyright that cultivate development in the form of new works.

The second instance of productive use appears in the protection of the *reverse engineering*⁴⁰⁰ of software for the purpose of promoting

396. *Campbell*, 510 U.S. at 579 (citations omitted). The Court relied heavily on Judge Leval’s influential article, *supra* note 395, in which he emphasizes the importance of the extent to which a work is transformative—in other words “productive”—and “employ[s] the quoted matter in a different manner or for a different purpose from the original,” *id.* at 1111.

397. *Campbell*, 510 U.S. at 579.

398. *See id.* (finding that transformative works “lie at the heart of the fair use doctrine’s guarantee of breathing space within the confines of copyright”).

399. *See* Jeremy Kudon, *Form over Function: Expanding the Transformative Use Test for Fair Use*, 80 B.U. L. REV. 579, 611 (2000) (determining that, in thirty-seven out of thirty-eight cases, the finding on the transformative factor mirrored the ultimate outcome in the case); *see also* Matthew D. Bunker, *Eroding Fair Use: The “Transformative” Use Doctrine After Campbell*, 7 COMM. L. & POL’Y 1, 16–23 (2002) (lamenting judicial emphasis on the transformative factor); Diane Leenheer Zimmerman, *The More Things Change, the Less They Seem “Transformed”: Some Reflections on Fair Use*, 49 J. COPYRIGHT SOC’Y USA 251, 260 (1998) (observing that courts reach peculiar conclusions on transformative use to attain particular outcomes).

400. “Reverse engineering” is generally defined as “starting with the known product and working backward to divine the process which aided in its development or manufacture.” *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 476 (1973). For a recent, more expansive definition of the phrase as “the process of extracting know-how or knowledge from a human-made artifact,” *see* Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of*

interoperability.⁴⁰¹ Recognition of this defense promotes development by encouraging more software developers to introduce new products into the marketplace.

Because computer software typically is distributed in object code form, which cannot be read by humans, reverse engineering is necessary for software developers to create compatible products.⁴⁰² Moreover, the process of working backwards from object code to human-readable source code involves decompilation or disassembly,⁴⁰³ which entails making a copy of the work—a practice that courts have found to constitute infringement.⁴⁰⁴

Of the rationales explaining reverse engineering, the most common is promoting interoperability.⁴⁰⁵ The seminal case finding that reverse engineering for interoperability purposes constitutes fair use is *Sega Enterprises Ltd. v. Accolade, Inc.*⁴⁰⁶ In *Sega*, an independent developer of video game cartridges reverse-engineered Sega cartridges to produce games that could be played on the Sega Genesis console.⁴⁰⁷ The court found that, if not for a fair use defense allowing reverse engineering, a copyright owner would have a “de facto monopoly” over ideas and functional concepts in the owner’s copyrighted software programs.⁴⁰⁸ It also explained that the practice

Reverse Engineering, 111 YALE L.J. 1575, 1577 (2002). The reverse engineering defense was recognized by Congress in the Digital Millennium Copyright Act, 17 U.S.C. § 1201(f) (2000).

401. Interoperability encompasses software programs operating, for example, on a range of hardware platforms, across networks, and together. Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2375 (1994).

402. Object code is the preferred format because users want the functionality that it provides and because developers seek to maintain the source code as a trade secret. See Samuelson & Scotchmer, *supra* note 400, at 1608 (arguing that a legal rule allowing reverse engineering for interoperability purposes is economically sound and legally defensible).

403. Cohen & Lemley, *supra* note 43, at 17 n.52; Samuelson & Scotchmer, *supra* note 400, at 1608.

404. See, e.g., *Sega Enterprises Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1519 (9th Cir. 1992) (holding that the copying of a computer object code may infringe the copyright holder’s exclusive rights “regardless of whether the end product of the copying also infringes those rights”).

405. See Samuelson & Scotchmer, *supra* note 400, at 1614–15 (listing other rationales for reverse engineering, such as fixing bugs, customizing programs, detecting infringement, learning what others have done, and—the “most economically significant reason”—promoting interoperability).

406. 977 F.2d 1510 (9th Cir. 1992).

407. *Id.* at 1514; see also *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832, 843–44 (Fed. Cir. 1992) (noting that reverse engineering, in the context of video game interoperability, is generally fair use).

408. *Sega*, 977 F.2d at 1527.

of reverse engineering “led to an increase in the number of independently designed video game programs offered for use with the Genesis console,” a result that aligned with copyright’s goal of “growth in creative expression.”⁴⁰⁹ Like the *Sega* court, most courts have allowed reverse engineering for interoperability purposes.⁴¹⁰

Courts’ application of the fair use defense for reverse engineering encourages development in the form of more software applications produced by more software developers.⁴¹¹ The increased quantity and compatibility is even more beneficial because software is a “network effects” market, in which users benefit from increases in the number of other users in the system.⁴¹² Product compatibility also

409. *Id.* at 1523.

410. *See, e.g.,* Sony Computer Entm’t, Inc. v. Connectix Corp., 203 F.3d 596, 609 (9th Cir. 2000) (permitting Connectix’s reverse engineering of Sony’s BIOS system); *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1539–40 n.18, 1541 n.21 (11th Cir. 1996) (endorsing the *Sega* approach in the context of computer operating systems software); *Atari Games Corp.*, 975 F.2d at 844 (explaining that reverse engineering “qualified as fair use”); *DSC Communications Corp. v. Pulse Communications, Inc.*, 976 F. Supp. 359, 364–66 (E.D. Va. 1997) (authorizing the reverse engineering of a telecommunications digital switching system); *Mitel, Inc. v. Iqtel, Inc.*, 896 F. Supp. 1050, 1056 (D. Colo. 1995) (permitting the copying of command codes for long-distance call controllers), *aff’d on other grounds*, 124 F.3d 1366 (10th Cir. 1997); *see also* *DSC Communications Corp. v. DGI Techs., Inc.*, 81 F.3d 597, 601 (5th Cir. 1996) (explaining that the plaintiff’s competitors might need to copy its copyrighted operating system to ensure compatibility of their products with the system); *cf. Samuelson & Scotchmer, supra* note 400, at 1609 n.163, 1612–13 (listing commentators praising the *Sega* decision). In *Connectix*, the Ninth Circuit extended the reverse engineering defense beyond the mere design of a complementary product to actual competition with the underlying platform. *See Weiser, supra* note 137, at 602 (contending that the *Connectix* court failed to adequately distinguish between complementary and competing products). It bears mention that, in sanctioning reverse engineering to allow developers to obtain access to unprotected parts of programs, the defense aligns with conceptions of necessity in addition to development. *See Bateman*, 79 F.3d at 1540 (interpreting the *Sega* holding in terms of the necessity of reverse engineering to facilitate interoperability); *Sega*, 977 F.2d at 1526 (finding that “the record clearly establishe[d] that the disassembly of the object code in Sega’s video game cartridges was necessary in order to understand the functional requirements for Genesis compatibility”).

411. *See* Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of “Lock Out” Programs*, 68 S. CAL. L. REV. 1091, 1133 (1995) (“If interoperability-related information is denied to programmers, the flow of new creative works into the market may slow to a trickle.”); Samuelson & Scotchmer, *supra* note 400, at 1625 (concluding that interoperability results in fewer wasted application development costs).

412. Cohen & Lemley, *supra* note 43, at 21; *see also* Liu, *supra* note 20, at 475 (noting the increasing value of software programs and platforms used by additional users “since this enables users to easily transfer learned skills, permits them to easily share common document formats, and encourages development of valuable compatible programs”). Market participants also may benefit from network effects. *See Samuelson et al., supra* note 401, at 2376 (commenting upon “the remarkable number of instances in which otherwise dogged competitors have come to recognize that their markets will be enhanced if they cooperate to develop common standards that provide interoperability”).

promises to lower entry barriers and facilitate competition, further increasing the number of products available to consumers.⁴¹³ For all of these reasons, the recognition of a fair use defense for reverse engineering promotes development.

2. *Existing Necessity Limits: Exclusions, Compulsory Licenses, First Sale.* Necessity-based limits encompass exclusions from copyright law, compulsory licenses, and the first sale doctrine.

First, copyright law carves out from infringement liability *exclusions* for several types of activity, including acts of libraries, certain activity in the public interest, and the making of ephemeral copies. Section 108 of title 17 of the U.S. Code allows public libraries and archives to reproduce and distribute copyrighted works for purposes such as preservation, the replacement of damaged or missing copies, interlibrary loan requests, and the promotion of research.⁴¹⁴ Section 110 exempts from infringement an array of public performances that cohere under the heading “public interest”: face-to-face teaching,⁴¹⁵ instructional broadcasting,⁴¹⁶ religious services,⁴¹⁷ certain nonprofit performances,⁴¹⁸ and transmissions of nondramatic⁴¹⁹ and dramatic literary works to visually disabled individuals.⁴²⁰ At a minimum, teaching, instructional broadcasting, religious services, and the transmission to handicapped audiences serve important public policies that can be aligned with conceptions of necessity.

Section 112 exempts radio broadcasters from infringement liability when they make copies of copyrighted works to facilitate the transmission of the works.⁴²¹ Congress granted broadcasters this “ephemeral recordings” exception “because of the generally

413. See Cohen & Lemley, *supra* note 43, at 22 (arguing that the “existing reverse engineering right afforded by copyright and trade secret laws” can facilitate competition between network standards that would not otherwise arise).

414. 17 U.S.C. § 108(a)–(e) (2000).

415. *Id.* § 110(1).

416. *Id.* § 110(2).

417. *Id.* § 110(3).

418. *Id.* § 110(4).

419. *Id.* § 110(8); see also *id.* § 121(a).

420. *Id.* § 110(9). See generally MARSHALL A. LEAFFER, UNDERSTANDING COPYRIGHT LAW § 8.18(A)–(K), at 324–37 (3d ed. 1999) (describing section 110 exceptions).

421. 17 U.S.C. § 112; see also Joyce Craig-Rient, Note, *Time to Face the Analog Music: How Traditional Radio Broadcasters Infringe Copyrights and What the Music Industry and Congress Can Do to Stop Them*, 72 GEO. WASH. L. REV. 621, 640 (2004) (explaining the contours of this exception).

recognized need and practical exigencies of the broadcasting industry.”⁴²²

Copyright law also contains an array of *compulsory licenses*, which require payment—but not permission—for certain uses.⁴²³ Many of these licenses provide only tangential support for a limit based on necessity. Section 118 presents the strongest example of necessity-based compulsory licensing, allowing public broadcasters⁴²⁴ to perform or display certain works⁴²⁵ during broadcast transmissions, to copy and distribute copies of such programs, and to tape such programs for nonprofit face-to-face teaching purposes.⁴²⁶ Congress provided this exception because of the problems that uniquely confront public broadcasting, such as “the special nature of programming, repeated use of programs, and, of course, limited financial resources.”⁴²⁷

Finally, the “*first sale*” doctrine limits a copyright owner’s right to control distribution of the copyrighted work. In particular, it allows purchasers to dispose of lawful copies in whatever fashion they wish, including by destruction, resale, donation, or lease.⁴²⁸ The rationale for the doctrine is “to prevent the copyright owner from restraining the free alienability of goods.”⁴²⁹ Absent this doctrine, persons possessing copies of a copyrighted work would be required to negotiate with the copyright owner every time they wished to discard

422. H.R. REP. NO. 94-1476, at 101 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5716.

423. Robert C. Denicola, *Mostly Dead? Copyright Law in the New Millennium*, 47 J. COPYRIGHT SOC’Y USA 193, 196 (2000). Compulsory licenses that I do not discuss in detail provide for retransmission of broadcasts by cable and satellite television companies and “cover” licenses for musical works. 17 U.S.C. §§ 111, 115.

424. A public broadcasting entity is a noncommercial and educational broadcasting station. 17 U.S.C. § 118(g).

425. The right applies to published nondramatic musical works and published pictorial, graphic, and sculptural works. *Id.* § 118(d).

426. *Id.*

427. H. REP. NO. 94-1476, at 101 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5716.

428. 17 U.S.C. § 109(a); *see also* LEAFFER, *supra* note 420, § 8.14(A), at 310 (emphasizing that the first sale doctrine accords broad rights of disposal to an individual who purchases a copy of an original work). The first sale doctrine does not apply to computer programs or sound recordings. 17 U.S.C. § 109(b).

429. LEAFFER, *supra* note 420, § 8.14(A), at 310; *see also* *Parfums Givenchy, Inc. v. C&C Beauty Sales, Inc.*, 832 F. Supp. 1378, 1388 (C.D. Cal. 1993) (noting the importance of effectuating policies “disfavoring restraints of trade and limitations on the alienation of personal property”). Another potential rationale is to enhance autonomy. *See* Jane C. Ginsburg, *Copyright and Control over New Technologies of Dissemination*, 101 COLUM. L. REV. 1613, 1632 (2001) (contending that the ability to access, view, and freely exchange copies is consistent with a commitment to enhancing end-user autonomy).

or lend their copies.⁴³⁰ In promoting alienability, the first sale doctrine thus represents a type of necessity-based exception to the distribution right. The doctrine also recalls the central purposes supporting courts' invalidation of restraints on the alienation of property.⁴³¹

3. *Existing Equity Limits: Copyright Misuse, Fraud, Estoppel, Laches.* Equity-based limits to copyright include misuse, fraud, estoppel, and laches. The doctrine of *copyright misuse* prevents copyright owners who engage in certain types of misconduct from enforcing the copyright.⁴³² The doctrine grew out of the unclean hands defense⁴³³ and the doctrine of patent misuse.⁴³⁴ The purpose of copyright misuse is to prevent copyright from expanding beyond its statutory bounds.⁴³⁵

As copyright law has expanded to cover information technologies—in particular, the computer industry, in which copyrights possess a unique ability to convey market power⁴³⁶—the defense has become more common.⁴³⁷ For example, courts have recognized the defense in cases of abuse of the judicial process⁴³⁸ and

430. LEAFFER, *supra* note 420, § 8.14(A), at 310.

431. *See supra* notes 254–57 and accompanying text.

432. Alcatel USA, Inc. v. DGI Techs., Inc., 166 F.3d 772, 792 (5th Cir. 1999); 2 PAUL GOLDSTEIN, COPYRIGHT § 9:35–40 (2d ed. 1998); HERBERT HOVENKAMP ET AL., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 3.4, at 3–41 (2002); Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111, 151 (1999).

433. *Alcatel*, 166 F.3d at 792; *see* Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors, 786 F.2d 1400, 1408 (9th Cir. 1986) (explaining that “[t]he defense of unclean hands by virtue of copyright misuse prevents the copyright owner from asserting infringement and asking for damages when the infringement occurs by his dereliction of duty”).

434. Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488, 491–94 (1942); LEAFFER, *supra* note 420, § 10.21(C)(1), at 472; Daniel J. Gifford, *Antitrust's Troubled Relations with Intellectual Property*, 87 MINN. L. REV. 1695, 1707 (2003). Copyright misuse differs from patent misuse in its shorter history and divergence from antitrust policy. HOVENKAMP ET AL., *supra* note 432, § 3.4b1, at 3–44.

435. Lemley, *supra* note 432, at 153; *see, e.g.*, Lasercomb Am., Inc. v. Reynolds, 911 F.2d 970, 978 (4th Cir. 1990) (finding that the plaintiff misused its copyright by enforcing a license agreement that prevented licensees or employees from developing competing software for ninety-nine years); *see also* Lemley, *supra* note 432, at 155 (arguing that the *Lasercomb* court failed to consider the possibility that not all cases of copyright misuse involve serious anticompetitive behavior).

436. HOVENKAMP ET AL., *supra* note 432, § 3.4a, at 3–43.

437. MERGES ET AL., *supra* note 13, at 494.

438. *See qad. inc. v. ALN Assocs.*, 770 F. Supp. 1261, 1265–71 (N.D. Ill. 1991) (applying the doctrine of copyright misuse when a plaintiff used its copyright to control material over which it had no legitimate rights).

the licensing of (1) medical coding systems on the condition that the licensee not buy similar works from competitors,⁴³⁹ (2) operating system software only if used with the licensor's hardware,⁴⁴⁰ and (3) software on the condition that the licensee refrain from developing competing products.⁴⁴¹

The defense of *fraud on the Copyright Office* applies when a plaintiff procures a copyright registration by making materially false statements to the Copyright Office⁴⁴² or omitting essential facts from the application.⁴⁴³ Courts penalize such conduct by declaring the registration invalid and incapable of supporting an infringement action.⁴⁴⁴

The doctrines of *copyright estoppel*, *equitable estoppel*, and *laches* provide three additional equitable limits based on the representations

439. Practice Mgmt. Info. Corp. v. Am. Med. Ass'n, 121 F.3d 516, 518–20 (9th Cir. 1997).

440. Alcatel USA Inc. v. DGI Techs., Inc., 166 F.3d 772, 775–80 (5th Cir. 1999); see DSC Communications Corp. v. DGI Techs., 81 F.3d 597, 601 (5th Cir. 1996) (finding that the defendant would likely prevail on the misuse defense because the plaintiff was “attempting to use its copyright to obtain a patent-like monopoly over unpatented microprocessor cards”); see also LEAFFER, *supra* note 420, § 10.21(C)(3), at 474 & n.197 (citing cases); Dan L. Burk, *Anticircumvention Misuse*, 50 U.C.L.A. L. REV. 1095, 1126 (2003) (discussing cases).

441. Tamburo v. Calvin, No. 94-C-5206, 1995 WL 121539, at *7 (N.D. Ill. Mar. 17, 1995).

442. Martin v. Cuny, 887 F. Supp. 1390, 1394 (D. Colo. 1995); Thomas F. Cotter, *Gutenberg's Legacy: Copyright, Censorship, and Religious Pluralism*, 91 CAL. L. REV. 323, 344 n.86 (2003). See generally Thomas P. Olson & Maya Alexandri, *Putting the Copyright Plaintiff on Trial: Two Tactics—And How to Beat Them*, in STRATEGIES FOR LITIGATING COPYRIGHT, TRADEMARK & UNFAIR COMPETITION CASES 9, 16–19 (PLI Patents, Copyrights, Trademarks, & Literary Prop. Course, Handbook Series No. 720, 2002).

443. LEAFFER, *supra* note 420, § 10.21(D), at 475; 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT, § 7.20[B], at 7-208 to 7-209 (2001). The omitted information often concerns the existence of public domain or copyrighted works upon which a plaintiff's work is based. See, e.g., Native Textiles v. Intimate Touch Inc., No. 92 Civ. 8979, 1993 WL 14962, at *1 (S.D.N.Y. Jan. 13, 1993) (rejecting the plaintiff's claim on the ground that it had copied its design from a design in the public domain); GB Mktg. USA v. Gerolsteiner Brunnen GmbH, 782 F. Supp. 763, 774–76 (W.D.N.Y. 1991) (finding unclean hands based on the plaintiff's knowing failure to disclose evidence of unoriginality to the Copyright Office); Russ Berrie & Co. v. Jerry Elsner Co., 482 F. Supp. 980, 988 (S.D.N.Y. 1980) (same).

444. LEAFFER, *supra* note 420, § 10.21(D), at 475; see 17 U.S.C. § 411(a) (2000) (providing that “no action for infringement of the copyright in any United States work shall be instituted until registration of the copyright claim has been made in accordance with this title”).

Fraud on the Copyright Office is often viewed as a subset of the “unclean hands” doctrine. See Atari Games Corp. v. Nintendo of Am. Inc., 975 F.2d 832, 846 (Fed. Cir. 1992) (holding that the defendant was not entitled to invoke the copyright misuse doctrine because its lying to the Copyright Office constituted “unclean hands”); Vogue Ring Creations, Inc. v. Hardman, 410 F. Supp. 609, 614 (D.R.I. 1976) (“The equitable maxim of unclean hands is applicable in determining the enforceability of copyright registrations; and it has been held, in a suit challenging the copyright of a brochure, to be inequitable conduct not to inform the Copyright Office of earlier publications.”).

or delay of a copyright holder.⁴⁴⁵ The principles underlying estoppel recall property doctrines such as, to name one example, the rule in boundary-line disputes regarding misrepresentations that induce reliance.⁴⁴⁶

Copyright estoppel prevents a copyright holder from claiming that a copyrighted work is fictional in an infringement action after previously representing that the work was factual.⁴⁴⁷ Equity explains the doctrine: “If a small but nonetheless significant number of readers will likely rely upon the author’s presentation of the work as factual, the social interest in allowing these readers to use these ‘facts’ without fear of copyright liability may be substantial.”⁴⁴⁸

Equitable estoppel applies when a copyright defendant can prove that the plaintiff’s actions reasonably induced the defendant to change position.⁴⁴⁹ When, for example, a copyright holder encourages an alleged infringer to reproduce the copyrighted work, the copyright holder will not be able to enforce the copyright.⁴⁵⁰

Delay forms the basis for the final equitable defense of *laches*. Laches generally is established if a defendant proves that the plaintiff’s inexcusable or unreasonable delay in bringing an

445. Another limit appears in section 406(a), which provides a complete defense to copyright infringement to one who in good faith relied on an error in name on the copyright notice on copies distributed before the Berne Convention Implementation Act took effect. 17 U.S.C. § 406(a); LEAFFER, *supra* note 420, § 10.21(E), at 476.

446. See *supra* note 344 and accompanying text.

447. *E.g.*, 1 NIMMER & NIMMER, *supra* note 443, § 2.11[C], at 2-172.21 to 2-172.22 (2001); Cotter, *supra* note 442, at 345–46.

448. Cotter, *supra* note 442, at 350; see, *e.g.*, Arica Inst., Inc. v. Palmer, 970 F.2d 1067, 1075 (2d Cir. 1992) (“Having expressly represented to the world that Ichazo’s theories are factual . . . Arica is not now permitted to make an inconsistent claim so as to better serve its position in litigation.”).

449. See, *e.g.*, Lotus Dev. Corp. v. Borland Int’l, Inc., 831 F. Supp. 202, 221 (D. Mass. 1993) (rejecting an estoppel defense because the defendant’s reliance was unreasonable), *rev’d on other grounds*, 49 F.3d 807, 814–16 (1st Cir. 1995); see also, *e.g.*, Hampton v. Paramount Pictures Corp., 279 F.2d 100, 104 (9th Cir. 1960) (holding that “[t]he doctrine of equitable estoppel does not erase the duty of due care and is not available for the protection of one who has suffered loss solely by reason of his own failure to act or inquire”); Lottie Joplin Thomas Trust v. Crown Publishers, Inc., 456 F. Supp. 531, 535 (S.D.N.Y. 1977) (requiring that the plaintiff “had knowledge of defendant’s infringing conduct, and either intended that his own conduct be relied upon or acted so that the [defendant] ha[d] a right to believe it was so intended,” and that “the defendant . . . be ignorant of the true facts and . . . rely on plaintiff’s conduct to his detriment”); Rohauer v. Killiam Shows, Inc., 379 F. Supp. 723, 730–31 (S.D.N.Y. 1974) (suggesting that abandonment manifested by an overt act “indicative of an intent to surrender rights in the copyrighted work” can induce reasonable reliance).

450. Cotter, *supra* note 442, at 346 n.91; see, *e.g.*, Lotus, 831 F. Supp. at 221 (rejecting a defense of equitable estoppel because the defendant’s reliance was unreasonable).

infringement action resulted in prejudice to the defendant.⁴⁵¹ The doctrine prevents copyright owners from obtaining relief when they are aware of an infringement claim but fail to bring it in a timely manner.⁴⁵²

4. *New Proposal: Tripartite Fair Use.* In this Section, I propose a new version of copyright fair use, made up of three prongs. Courts already recognize the productive fair use defense.⁴⁵³ I offer here defenses based on necessity and equity. The uses encompassed in the three categories consist of (1a) transformative use and (1b) reverse engineering of software to promote interoperability (together, productive fair use), (2) uses that increase the diversity of viewpoints making up a robust dialogue essential to democracy (necessary fair use), and (3a) *de minimis* uses and (3b) uses that accord with widely followed societal practices (together, equitable fair use).

Under my proposed analysis, a defendant who shows that any of these three categories applies is entitled to a presumption of lawfulness.⁴⁵⁴ Incentives to develop works must remain a part of the analysis, so the presumption must be rebuttable.⁴⁵⁵ Such a rebuttal could take many forms: for example, the copyright holder could rebut the presumption of lawfulness by showing that the quantity or quality

451. See *Lotus*, 831 F. Supp. at 218 (pointing out that establishing laches requires a showing that the plaintiff's conduct caused an unreasonable delay that prejudiced the defendant (citing *Costello v. United States*, 365 U.S. 265, 282 (1961))); 3 NIMMER & NIMMER, *supra* note 443, § 12.06 (same).

452. See *Martin v. Cuny*, 887 F. Supp. 1390, 1394 (D. Colo. 1995) (explaining that copyright owners are less likely to obtain relief when delays in reporting an infringement claim make it difficult to "isolate sales and profits and losses attributable to the work"); David L. Hayes, *Performing an Intellectual Property Audit of Copyrights*, in CONDUCTING INTELLECTUAL PROPERTY AUDITS 175, 219 (P.L.I. Patents, Copyrights, Trademarks, & Literary Prop. Course, Handbook Series No. 403, 1995) (emphasizing that estoppel does "not provide those who did not reasonably rely on the copyright owner's actions with any rights to the copyrighted work"); Barry I. Slotnick, *Copyright Infringement Litigation*, in COPYRIGHT & TRADEMARK LAW FOR THE NONSPECIALIST UNDERSTANDING THE BASICS 125, 144 (P.L.I. Patents, Copyrights, Trademarks, & Literary Prop. Course, Handbook Series No. 741, 2003) (explaining that laches applies when a "copyright owner failed to claim rights diligently and this failure prejudiced the infringer").

453. See *supra* Part IV.A.1.

454. Presumptively allowing such uses is appropriate because of not only the importance of the policies served by development, necessity, and equity, but also the questionable need for copyright protection in many instances. See *supra* Part II.B.2.a.

455. The rebuttal is required because copyright protection, even if it is not necessary in many instances for development, nevertheless is necessary in some settings (for example, for works that are expensive to create, such as special-effects motion pictures). See *supra* Part II.B.2.a.

of expressive works would be substantially reduced⁴⁵⁶ if the defendant's use was allowed.⁴⁵⁷ Although such inquiries would not always elicit exact answers, they nonetheless would highlight the cases in which the effect on incentives would be most pronounced such that the fair use defense should fail. Courts can continue to consider the four nonexclusive factors articulated in section 107 when determining fair use, but the overarching structure of the analysis would expand to embrace tripartite fair use.⁴⁵⁸

456. One useful, though often speculative, baseline comparison would be reasonably anticipated potential levels of production.

457. See Fisher, *supra* note 183, at 1781–82 (proposing that a judge should determine a use fair when the harm to producers is (1) insubstantial or (2) substantial, but without “materially reduc[ing] either the quantity or quality of the [present and future] producers’ output”); cf. Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600, 1618 (1982) (stating that courts should deny a fair use defense “whenever a substantial injury appears that will impair incentives”). Because of the increase in the scope, subject matter, and duration of copyrighted works, see *supra* Part I.A, a reduction in the revenues garnered by copyright holders often will not have an effect on the production of copyrighted works. See Glynn S. Lunney, Jr., *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975, 1017 (2002) (noting that the shift from a cost-based to value-based system results in excess revenues for copyright owners, which allows for the copyright owner to “experience some reduction in the market for or value of her work, yet still receive sufficient incentive to ensure her work’s production”).

458. Several of the factors that courts currently analyze—such as the transformative nature of the use, commercial nature of the use, amount and importance of the portion used, and the effect of the use on the market for the copyrighted work—will be relevant in this analysis. Section 107 articulates four factors for courts to apply in analyzing fair use:

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 107 (2000). Even if courts continue to consider these factors under the new analysis, the uncertainty that currently plagues the fair use defense would be diminished for several reasons.

For starters, the nature of a rebuttable presumption is much clearer than the grab bag of factors currently considered by courts, a morass that provides no compass for deciding among contrary conclusions on the four factors and that uses them more as “convenient pegs on which to hang antecedent conclusions,” David Nimmer, “*Fairest of them All*” and *Other Fairy Tales of Fair Use*, 66 LAW & CONTEMP. PROBS. 263, 281 (Winter/Spring 2003), than as inputs to attaining a conclusion. See Carrier, *supra* note 164, at 841–42 (expounding the benefits of rebuttable presumptions, which “promise certainty for parties, increased predictability, and the reduction of error costs”).

Second, a shift to “substantial reduction in quality or quantity” reserves room in the analysis for the effect of a use on these crucial outputs but ensures that they predominate only in those cases in which the effect is most pronounced, rather than distracting courts with unmoored factors whose relationship to the ultimate purposes of the inquiry is often not apparent. Even if the determination of the rebuttal is not crystal clear, it is better to move such inquiries to this setting, which provides more room for important policies such as development,

I detailed the productive fair use defense in Section A.1.⁴⁵⁹ The prong of *necessary fair use* should apply when the use of the copyrighted work is necessary to increase the diversity of viewpoints making up a robust dialogue essential to democracy.⁴⁶⁰ As the Supreme Court has recognized, “the widest possible dissemination of information from diverse and antagonistic sources is essential to the

necessity, and equity to operate, than to leave the confusion at the level where it currently resides, plaguing every case in which the fair use defense is raised.

Finally, the new construct is consistent with the statutory provision on fair use because (1) in determining substantial harm under the new test, courts may consider the four factors and (2) the statute does not limit courts’ analysis to the factors, but provides only a nonexclusive list of factors to consider. *See* 17 U.S.C. § 107 (“[T]he factors to be considered shall include”); *cf.* Shubha Ghosh, *Deprivatizing Copyright*, 54 CASE W. RES. L. REV. 387, 488–91 (2003) (reemploying the four factors in support of a “public minded” fair use); Michael J. Madison, *A Pattern-Oriented Approach to Fair Use*, 45 WM. & MARY L. REV. 1525, 1642–44 (2004) (suggesting a “pattern-oriented approach” to fair use that integrates the factors). In short, adopting a tripartite fair use defense taking the form of a rebuttable presumption promises to increase clarity and predictability, to weave into the level of doctrine the primary overarching goals of copyright, and to align copyright with crucial categories of property law defenses.

459. *See supra* Part IV.A.1.

460. The unique importance of the policies at the heart of this defense should call for, at a minimum, a particularly high standard for satisfying the rebuttal.

The public policies elucidated in this Section partially overlap with a defense based on the First Amendment. The conflict between the Copyright Clause and the First Amendment has garnered significant attention, at least in the law reviews. *E.g.*, Robert C. Denicola, *Copyright and Free Speech: Constitutional Limitations on the Protection of Expression*, 67 CAL. L. REV. 283 (1979); Paul Goldstein, *Copyright and the First Amendment*, 70 COLUM. L. REV. 983 (1970); Netanel, *supra* note 209; Melville B. Nimmer, *Does Copyright Abridge the First Amendment Guarantees of Free Speech and Press?*, 17 UCLA L. REV. 1180 (1970); L. Ray Patterson, *Free Speech, Copyright, and Fair Use*, 40 VAND. L. REV. 1 (1987); Yen, *supra* note 210. But with extremely rare exceptions, *e.g.*, *Triangle Publ’ns, Inc. v. Knight-Ridder Newspapers, Inc.*, 445 F. Supp. 875, 881–84 (S.D. Fla. 1978), *aff’d on other grounds*, 626 F.2d 1171 (5th Cir. 1980), courts have not employed the First Amendment to limit copyright, instead resorting to assurances that accommodations such as the idea-expression dichotomy and fair use defense reconcile the two, *see Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003) (“[C]opyright law contains built-in First Amendment accommodations [because] it distinguishes between ideas and expression and makes only the latter eligible for copyright protection. . . . [T]he ‘fair use’ defense allows the public to use not only facts and ideas contained in a copyrighted work, but also expression itself in certain circumstances.”). *See generally* Netanel, *supra* note 209, at 7–30 (critiquing traditional justifications); Yen, *supra* note 210, at 433–34 (critiquing the idea-expression dichotomy in particular). The precise scope of a First Amendment necessity-based limit to copyright (beyond the uses covered in the application of the necessary fair use defense) lies outside the scope of this Article. One interesting version of such a limit is explored in Jed Rubenfeld, *The Freedom of Imagination: Copyright’s Constitutionality*, 112 YALE L.J. 1, 1 (2002), proposing copyright limits based on “freedom of imagination.”

welfare of the public.”⁴⁶¹ Similarly, the national communications policy, as Justice Breyer has remarked, “seeks to facilitate the public discussion and informed deliberation . . . [that] democratic government presupposes.”⁴⁶² Conceptions of robust, uninhibited dialogue among citizens are at the heart of theories of democracy such as deliberative democracy and civic republicanism.⁴⁶³

Despite the importance of a range of viewpoints, information sources in society today are rapidly consolidating, with the result that fewer companies control more of the nation’s dialogue and culture than ever before.⁴⁶⁴ Vertical integration of media conglomerates in recent years has resulted in cable and broadcast networks’ owning much of the content that they distribute, content that typically is copyrighted.⁴⁶⁵ In 2002, for example, only 8.7 percent of prime-time content came from producers unaffiliated with the networks.⁴⁶⁶ The conglomerates’ control over the copyrighted works has been

Of course, one could envision other conceivable roles for a necessary fair use doctrine. Two such examples include educational uses of copyrighted works and a “newsworthiness” exception. *See* 17 U.S.C. § 107 (recognizing teaching uses); Melville B. Nimmer, *Does Copyright Abridge the First Amendment Guarantees of Free Speech and Press?*, 17 UCLA L. REV. 1180, 1197–99 (1970) (offering an exception for “news photographs” based on the Zapruder film of the Kennedy assassination and photographs of the My Lai massacre).

Finally, I take as a baseline the benefits of robust debate. Someone who questioned such benefits and was more concerned about protecting incentives to develop and preserve the work might take issue with the proposal. But even if there is disagreement on this point, the recognition of IP’s adoption of property’s framework at least carves out room in the paradigm for limits.

461. *Associated Press v. United States*, 326 U.S. 1, 20 (1945).

462. *Turner Broad. Sys., Inc. v. FCC*, 520 U.S. 180, 227 (1997) (Breyer, J., concurring in part and dissenting in part) (citation omitted).

463. *E.g.*, AMY GUTMANN & DENNIS THOMPSON, *DEMOCRACY AND DISAGREEMENT* (1996); JURGEN HABERMAS, *BETWEEN FACTS AND NORMS: CONTRIBUTIONS TO A DISCOURSE THEORY OF LAW AND DEMOCRACY* (1996); CASS R. SUNSTEIN, *DEMOCRACY AND THE PROBLEM OF FREE SPEECH* (1993); CASS R. SUNSTEIN, *THE PARTIAL CONSTITUTION* (1993).

464. LAWRENCE LESSIG, *FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* 162–68 (2004). Far from halting the consolidation, the Internet often reflects the trend. *See, e.g.*, Bill Moyers, Keynote Address to the National Conference on Media Reform, at <http://www.commondreams.org/views03/1112-10.htm> (Nov. 8, 2003) (on file with the *Duke Law Journal*) (noting that “the traffic patterns of the online world are beginning to resemble those of television and radio,” with AOL Time Warner, Yahoo, and Microsoft together accounting for half of all user time spent online).

465. Ellen P. Goodman, *Media Policy Out of the Box: Engaging the Public in an Age of Plenty* 62 (July 20, 2004) (unpublished manuscript, on file with the *Duke Law Journal*).

466. MARA EINSTEIN, *PROGRAM DIVERSITY AND THE PROGRAM SELECTION PROCESS ON BROADCAST NETWORK TELEVISION* 26 (FCC Media Ownership Working Group Study No. 5 Sept. 2002), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-226838A10.pdf; Goodman, *supra* note 465, at 63.

strengthened by the burgeoning duration and scope of copyright and by the protections provided by the DMCA.⁴⁶⁷

Moreover, the number of outlets is shrinking due to horizontal consolidation. In the broadcast industry, four national networks own nearly every major local station in the top four media markets.⁴⁶⁸ The four largest cable and satellite operators served approximately 56 percent of all U.S. cable and satellite subscribers in 2003, and the ten largest served 82 percent of subscribers.⁴⁶⁹ In addition to reducing the number of outlets for copyrighted content, concentration leads to “bland” reporting, because the networks steer clear of any controversy that might threaten their ability to sell products.⁴⁷⁰

467. See *supra* Part I.A.

468. Goodman, *supra* note 465, at 62; see Comments of The National Association of Broadcasters and Network Affiliated Stations Alliance, 2002 Biennial Regulatory Review—Review of the Commission’s Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202, at 32, MB Docket No. 02-277 (FCC filed Dec. 9, 2002).

The radio industry presents another ominous example of consolidation. Largely as a result of the passage of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.), ten large companies now control 65 percent of listeners and radio revenue nationwide. Peter DiCola & Kristin Thomson, Future of Music Coalition, Radio Deregulation: Has It Served Citizens and Musicians? 24, at <http://www.futureofmusic.org/images/FMCradiostudy.pdf> (2002) (on file with the *Duke Law Journal*); see *id.* at 23–24 (noting that Clear Channel grew from 40 stations to 1,233 stations). In 2001, the four largest firms in all markets held nearly 93 percent of market revenue. FCC, REVIEW OF THE RADIO INDUSTRY, 2001, app. D., available at <http://www.fcc.gov/mb/policy/docs/radio01.pdf>. The diversity of music played has suffered as a result of the increasing homogeneity of radio formats, fewer gatekeepers deciding what music is played, and oligopolies in radio and recording companies. DiCola & Thomson, *supra*, at 5, 53.

469. FCC, *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 19 F.C.C.R. 1606, 1687 & tbl. B-3 (2004).

470. Jerome A. Barron, *Access to the Press—A New First Amendment Right*, 80 HARV. L. REV. 1641, 1646–47 (1967) (noting that it is “‘bad business’ to espouse the heterodox or the controversial” and thus that “the opinion vacuum is filled with the least controversial and bland ideas”); Benkler, *supra* note 141, at 378–79 (explaining that the media’s production of “thin,” nonoffensive information stems from the flatness of the demand curve for information of interest to many people and from the media’s inability to price discriminate (citing C. Edwin Baker, *Giving the Audience What It Wants*, 58 OHIO ST. L.J. 311, 329–30 (1997))); Yochai Benkler, *Freedom in the Commons: Towards a Political Economy of Information*, 52 DUKE L.J. 1245, 1267 (2003) (asserting that the economies of the commercial mass media model require limitations on content to attract large audiences); Netanel, *supra* note 26, at 362 (stating that media entities prevent controversial use that is contrary to corporate image or that threatens sales of expressive products).

These observations have been borne out by recent and increasingly common decisions not to run controversial programming. See, e.g., Lisa de Moraes, *CBS Pulls ‘Reagans’ Miniseries*, WASH. POST, Nov. 5, 2003, at A1 (describing CBS’s withdrawal of a miniseries on former President Reagan, apparently in response to political pressure); George Raine, *‘Child’s Pay’ Ad Hits the Airwaves; Nixed by Super Bowl, Dot-Com Moves On*, S.F. CHRON., Jan. 27, 2004, at A2 (describing CBS’s rejection of an advertisement critical of President Bush and sponsored by

Relatedly, concentration excludes challenges to the status quo,⁴⁷¹ fosters an “unequal distribution of power to express ideas,”⁴⁷² and contributes to “an inert people.”⁴⁷³ And naturally, the conglomerates that hold most copyrighted works—including the symbolic and popular works that must be referenced to engage the public most effectively and provide commentary⁴⁷⁴—are reluctant to license their works to those seeking to criticize the expression.⁴⁷⁵

Because of the importance of a diverse array of viewpoints and because media consolidation and the expansion of copyright have reduced the number of alternative perspectives, activity that promises to counteract this trend should be privileged. In particular, activity that relies on copyrighted expression to criticize the prevailing wisdom, comment upon current events, parody popular works of culture, or develop ideas should be entitled to the defense of necessary fair use. To avoid concerns of viewpoint-based discrimination under the First Amendment, I would privilege not just critical viewpoints, but all viewpoints.⁴⁷⁶ In other words, any use that

MoveOn.org that was to be aired during the Super Bowl); Jim Rutenberg, *Disney Is Blocking Distribution of Film That Criticizes Bush*, N.Y. TIMES, May 5, 2004, at A1 (reporting that Disney allegedly blocked Michael Moore’s film *Fahrenheit 9/11* because of concern that the negative portrayal of President Bush could jeopardize Disney’s tax breaks); Goodman, *supra* note 465, at 67 n.227 (providing examples).

471. See C. Edwin Baker, *The Media That Citizens Need*, 147 U. PA. L. REV. 317, 362 (1998) (noting that conglomerate ownership may “create pressures for the media units not to interfere with the economic interests of the nonmedia parts of the organization, which results in “media entities['] becom[ing] less watchful of the problematic corporate or government activities that intertwine with corporate interests”); Goodman, *supra* note 465, at 67 (noting that the importance of quarterly earnings targets for the large corporations that have absorbed the media companies has led to “an unduly heavy reliance on official sources and canned reporting to produce content quickly”).

472. Benkler, *supra* note 141, at 378.

473. *Whitney v. California*, 274 U.S. 357, 375 (1927) (Brandeis, J., concurring); see also Benkler, *supra* note 141, at 379 (arguing that the media’s production of “safe” material “reinforces . . . the preferences of average consumers” and fails to “challenge[] broadly shared cultural perceptions”); Pessach, *supra* note 29, at 1088 (noting that the corporate media seek to maximize profit “by producing and distributing products to as many audiences and markets as possible”).

474. See Neil Weinstock Netanel, *Market Hierarchy and Copyright in Our System of Free Expression*, 53 VAND. L. REV. 1879, 1908–09 (2000) (“Existing works of authorship comprise and contain a significant part of the language, understandings, standards, and norms of social and professional groups.”).

475. *Id.* at 1904–06.

476. To the extent that my proposal requires content-based analysis, it is no different from current copyright law, which is already content-based but is not subject to strict scrutiny. See Julie E. Cohen, *Examined Lives: Informational Privacy and the Subject as Object*, 52 STAN. L. REV. 1373, 1417 (2000) (contending that IP laws “are expressly content-based, and thus

references copyrighted work in expressing a statement would be entitled to the defense.⁴⁷⁷

How would the necessary fair use defense alter existing jurisprudence? Generally speaking, by protecting all viewpoints, it would cover works that critiqued the prevailing orthodoxy or mainstream culture, such as criticism, parody,⁴⁷⁸ and review.⁴⁷⁹ It also would—in contrast to courts’ current analysis—privilege satire and avoid the need for courts to draw the difficult line between uses that criticize the work itself (parody) and uses that employ the original work as a vehicle to comment upon society in general (satire). Without explicitly relying on such a framework, courts have recognized strands of a fair use defense centered upon necessity. Accordingly, the defense would not have changed the outcome in several cases in which courts found that the fair use defense applied, such as

- a rap parody of the “bland and banal” 1960s rock ballad “Pretty Woman”;⁴⁸⁰
- a parody of the classic novel *Gone with the Wind* that aimed to “explode the romantic, idealized portrait of the antebellum South during and after the Civil War” by retelling the story of the white South from the perspective of the illegitimate daughter of a plantation owner and a slave;⁴⁸¹

illustrate that . . . this characterization doesn’t always matter”); Lemley & Volokh, *supra* note 387, at 186 (explaining that copyright law is content-based because “liability turns on the content of what is published”). My proposal could also be viewed as content-neutral in accordance with broader conceptions of this sphere. See Netanel, *supra* note 209, at 47–54 (viewing copyright as content-neutral speech regulation).

477. I use the phrase “statement” broadly to encompass any written expression that could conceivably be viewed as commenting upon copyrighted works or society in general.

478. The Supreme Court defined parody as “the use of some elements of a prior author’s composition to create a new one that, at least in part, comments on that author’s works.” *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 580 (1994). Of course, if “the commentary has no critical bearing on the substance or style of the original composition, which the alleged infringer merely uses to get attention or to avoid the drudgery in working up something fresh,” the parody defense would not apply. *Id.*

479. Such activity could also be protected as forms of productive fair use. Finding that necessary fair use applies provides an independent basis for protection. There may also be room to apply the defense to activity beyond the examples listed in the text, such as to particular entertainment uses, with the ultimate delineation of such covered activity to be determined on a case-by-case basis.

480. *Campbell*, 510 U.S. at 573.

481. *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1270 (11th Cir. 2001).

- a nonprofit organization's letter copying a list of state legislators from another organization's mailing, "used primarily in exercising . . . First Amendment speech rights to comment on public issues and to petition the government regarding legislation";⁴⁸² and
- a newspaper's publication of an article containing parts of works owned by Church of Scientology founder L. Ron Hubbard.⁴⁸³

But recognition of the defense likely would have changed the outcome in other cases,⁴⁸⁴ in which courts rejected the fair use defense for

- comic books that parodied the wholesome Mickey Mouse image of "scrubbed faces, bright smiles and happy endings" by offering a bawdy portrayal of the characters as "active members of a free thinking, promiscuous, drug ingesting counterculture";⁴⁸⁵
- critical comments accompanying copyrighted newspaper articles posted on a right-wing organization's electronic bulletin board;⁴⁸⁶
- a breakaway church's copying and use of a book written by

482. Nat'l Rifle Ass'n of Am. v. Handgun Control Fed'n, 15 F.3d 559, 562 (6th Cir. 1994).

483. Religious Tech. Ctr. v. Lerma, 908 F. Supp. 1362, 1366–67 (E.D. Va. 1995); *see also* Nunez v. Caribbean Int'l News Corp., 235 F.3d 18, 25 (1st Cir. 2000) (finding a newspaper's publication of a photograph of a beauty pageant winner to constitute fair use in the context of a public controversy over whether the pageant winner appeared naked in the photograph).

484. The benefits of the approach are not reserved for the cases that would have been decided differently. Many uses of copyrighted works never reach the stage of judicial scrutiny, as individuals halt their activity in response to cease-and-desist letters from the copyright holders. *See, e.g.*, Giselle Fahimian, *How the IP Guerrillas Won: (R) superTM Ark, Adbusters, Negativland, and the "Bullying Back" of Creative Freedom and Social Commentary*, 2004 STAN. TECH. L. REV. 1, ¶ 62–64, at http://stlr.stanford.edu/STLR/Articles/04_STLR_1/index.htm (discussing the withdrawal of "alternative Barbies," including "Possessed Barbie" and "Fat and Ugly Barbie," in response to a cease-and-desist letter from Mattel); Cecilia Ogbu, *I Put Up a Website About My Favorite Show and All I Got Was This Lousy Cease-and-Desist Letter: The Intersection of Fan Sites, Internet Culture, and Copyright Owners*, 12 S. CAL. INTERDISC. L.J. 279, 301–07 (2003) (discussing cease-and-desist letters that Fox sent to fan fiction sites). To the extent that my approach clarifies fair use jurisprudence and expands the uses that are deemed acceptable, it offers additional benefits beyond changing the outcome in certain litigated cases.

485. Walt Disney Prods. v. Air Pirates, 581 F.2d 751, 753 (9th Cir. 1978).

486. L.A. Times v. Free Republic, No. 98-7840, 2000 U.S. Dist. LEXIS 5669, at *4 (C.D. Cal. Apr. 4, 2000).

the founder of the original church, which was no longer in print;⁴⁸⁷

- a critical biography containing excerpts from copyrighted letters written by the subject;⁴⁸⁸
- a poetic account of the O.J. Simpson murder trial entitled “The Cat NOT in the Hat! A Parody by Dr. Juice,” based on a Dr. Seuss book,⁴⁸⁹ and
- a sculpture, based on a photograph, which provided a “satirical critique of our materialistic society.”⁴⁹⁰

In short, carving out a space in fair use jurisprudence for activity that at least modestly counteracts the consolidation of information sources and viewpoints would have beneficial effects for democracy and would constitute a necessity-based limit on copyright.⁴⁹¹

Importing an equity-based limit into the fair use defense would lead to the discovery of the third prong of tripartite fair use, *equitable fair use*. On its broadest level, such a defense would recognize the element of fairness in fair use and would be consistent with courts’ treatment of the defense as an “equitable rule of reason,”⁴⁹² which is applied on a case-by-case basis.⁴⁹³ On a more concrete level, it would extend the defense to *de minimis* uses and would proffer a new defense for uses that accord with widely followed societal practices.⁴⁹⁴

The first application would cover *de minimis* use of a copyrighted work. Courts have allowed the copying of an insignificant part of a copyright holder’s expression under either a separate “*de minimis*” exception or the “market effect” prong of fair use analysis. The Supreme Court in *Sony Corp. of America v. Universal City Studios, Inc.*,⁴⁹⁵ for example, intimated a connection between the two concepts

487. *Worldwide Church of God v. Phila. Church of God*, 227 F.3d 1110, 1121 (9th Cir. 2000); *see also id.* at 1122 (Brunetti, J., dissenting) (emphasizing the church’s need to utilize the copyrighted text because it was “out of print and difficult to obtain through normal channels”).

488. *Salinger v. Random House*, 811 F.2d 90, 99–100 (2d Cir. 1987).

489. *Dr. Seuss Enterprises L.P. v. Penguin Books USA, Inc.*, 109 F.3d 1394, 1403 (9th Cir. 1997).

490. *Rogers v. Koons*, 960 F.2d 301, 310 (2d Cir. 1992).

491. It also would recall the necessity exception in property law limiting the right to exclude based on First Amendment concerns. *See supra* notes 309–13 and accompanying text.

492. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 448 n.31 (1984) (quoting H.R. REP. NO. 94–1476, at 66, *reprinted in* 1976 U.S.C.C.A.N. 5659, 5680).

493. *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 549 (1985).

494. In accordance with its equitable nature, the defense also could be applied to other occasional uses for which a finding of infringement would be unfair.

495. 464 U.S. 417 (1984).

in finding that “a use that has no demonstrable effect upon the potential market for, or the value of, the copyrighted work need not be prohibited in order to protect the author’s incentive to create.”⁴⁹⁶ *De minimis* uses have no effect on a copyright holder’s incentives and should be privileged under an equity-focused version of fair use.⁴⁹⁷

A second category would encompass activity that falls within *widely followed societal practices*. The fact that a significant segment of society is engaging in an activity should count as a factor in deciding whether to excuse the activity.⁴⁹⁸ Aligning judicial treatment with common practices would reduce apparently unjust punishment and defiance of the law and would accord with notions of fairness. In *Sony*, the Court excused private, noncommercial “time-shifting”—by which home viewers tape television programs to watch at a later time⁴⁹⁹—that was widespread and that programmers and the public considered to be ordinary and proper.⁵⁰⁰

Another potential application of the concept appears in the peer-to-peer file sharing that has recently swept the music world. Services such as Napster, Grokster, Morpheus, Kazaa, BearShare, and

496. *Id.* at 450; see also *Amsinck v. Columbia Pictures Indus., Inc.*, 862 F. Supp. 1044, 1049 (S.D.N.Y. 1994) (stating that the doctrines of *de minimis* use and fair use overlap “where the copyright owner suffers no demonstrable harm from the use of the work”).

497. See, e.g., *Warner Bros. Inc. v. Am. Broad. Co.*, 720 F.2d 231, 242 (2d Cir. 1983) (explaining that when literal copying encompasses only a small and insignificant portion of a copyrighted work, the unauthorized copying has usually been permitted under a *de minimis* rule); *G.R. Leonard & Co. v. Stack*, 386 F.2d 38, 40 (7th Cir. 1967) (affirming the district court’s ruling that the defendant’s copying five of ninety thousand guide entries constituted *de minimis* use); *Werlin v. Reader’s Digest Ass’n*, 528 F. Supp. 451, 464 (S.D.N.Y. 1981) (finding the duplication of two sentences from an article “so fragmented as to be *de minimis*”).

498. Reliance on community standards of fairness should only implicate standards or norms that are “truly . . . shared one[s] and [that] transcend[] the particular commercial interests and agendas of those involved in the case.” Cohen, *supra* note 411, at 1131. For a general discussion of the characteristics, existence, and emergence of norms, see Robert D. Cooter, *Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643, 1661–66 (1996).

499. 464 U.S. at 421.

500. Lloyd L. Weinreb, *Fair’s Fair: A Comment on the Fair Use Doctrine*, 103 HARV. L. REV. 1137, 1155 (1990). Professor Weinreb, discussing *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539 (1985), points to the copier’s “wrongful behavior” in obtaining a copy of an unpublished manuscript as the reason for the Court’s rejection of the fair use defense. Weinreb, *supra*, at 1157–58. He also explains Jerry Falwell’s victory over Larry Flynt in *Hustler Magazine, Inc. v. Moral Majority, Inc.*, 796 F.2d 1148 (9th Cir. 1986), on the basis of “what is simply fair or unfair,” commenting that “[t]he majority’s factor analysis is wholly unconvincing, but that one cannot ignore the force of the sentiment that Flynt ‘got what was coming to him.’” Lloyd L. Weinreb, *Fair Use and How It Got That Way*, 45 J. COPYRIGHT SOC’Y U.S.A. 634, 644 (1998).

LimeWire have enabled users to share billions of files containing copyrighted sound recordings.⁵⁰¹ Many of the participants who upload and download copyrighted works either do not believe or do not care that their activity violates the law.⁵⁰² In fact, certain groups view noncompliance with the law as “glamorous” or “courageous.”⁵⁰³ In short, there is a significant disconnect between societal norms, which favor the activity,⁵⁰⁴ and the law, which punishes it.⁵⁰⁵ The benefits to reconciling the two are significant enough that courts at least should consider the norms in determining whether a use is fair. Of course, as in each of the categories of fair use explored in this Article, the copyright holder could rebut the presumption of fair use by showing a substantial reduction in the quantity or quality of expressive works produced.⁵⁰⁶ In the case of file sharing, for example, the recording industry would have a viable,⁵⁰⁷ though not

501. See Tim Wu, *When Code Isn't Law*, 89 VA. L. REV. 679, 726–40 (2003) (providing a history of peer-to-peer networks); MP3 Search Tools, Download.com, at <http://download.com.com/3150-2166-0-1-4.html> (last visited Feb. 15, 2004) (on file with the *Duke Law Journal*) (noting that Kazaa had been downloaded more than 326 million times and Morpheus more than 120 million times as of February 15, 2004).

502. A Pew Internet Project study conducted in 2003 concluded that “67% of Internet users who download music say they do not care about whether the music they have downloaded is copyrighted.” Mary Madden & Amanda Lenhart, The Pew Internet & Am. Life Project, Music Downloading, File-Sharing and Copyright: A Pew Internet Project Data Memo 1, at http://www.pewinternet.org/PPF/r/96/report_display.asp (July 31, 2003) (on file with the *Duke Law Journal*). An earlier study demonstrated that 78 percent of those downloading music do not believe that it is stealing to save music files to their computer hard drives. Amanda Lenhart et al., The Pew Internet & Am. Life Project, Downloading Free Music: Internet Music Lovers Don't Think It's Stealing 5, at http://www.pewinternet.org/PPF/r/23/report_display.asp (Sept. 28, 2000) (on file with the *Duke Law Journal*); see also Rick Harbaugh & Rahul Khemka, Does Copyright Enforcement Encourage Piracy? 6 (Aug. 2001) (unpublished manuscript, on file with the *Duke Law Journal*) (reporting that 14 percent of survey participants consider illegal copying of software to be a serious crime), available at <http://econ.mckenna.edu/papers/2000-14.pdf>.

503. Lior Jacob Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 VA. L. REV. 505, 581 (2003) (explaining teenagers' reactions to the injunction of Napster and concluding that “all the social incentives pointed toward circumventing the newly announced law”).

504. In fact, cooperative behavior and trust permeate the networks, perhaps as a result of technology that magnifies cooperative behavior and masks uncooperative behavior. *Id.* at 548–49.

505. Uploading and downloading copyrighted files violate the rights of distribution and reproduction, respectively. And as currently constituted, the fair use defense does not apply. See *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1014–19 (9th Cir. 2001) (finding that users who uploaded and downloaded copyrighted files over the Internet did not qualify for the fair use defense).

506. See *supra* note 455–57 and accompanying text.

507. See Wu, *supra* note 501, at 710 (discussing the “powerful” effects that Napster had on the music industry); Patrick Brethour, *Music Sales Tumble 1.3% Worldwide*, THE GLOBE AND

certain,⁵⁰⁸ prospect of satisfying the rebuttal by demonstrating that allowing such activity would significantly reduce the number of copyrighted works that would be created. But requiring courts at least to *consider* widespread community practices in the analysis reintroduces a healthy dose of fairness into fair use.

* * *

As I have shown, (1) many exemptions, compulsory licenses, and equity-based defenses already exist in copyright law and (2) the introduction of a tripartite fair use doctrine promises to recognize uses that are necessary to promote discourse in a democracy and that are equitable in acknowledging widespread community norms.

B. Patent Law

Eleven limits based on development, necessity, and equity currently appear, or should be created or recovered, in patent law. The necessity limit surfaces in government appropriation of patents and state sovereign immunity. Equitable defenses appear in the doctrines of inequitable conduct, prosecution laches, patent misuse, exhaustion, implied license, repair, and estoppel limits on the doctrine of equivalents, and in the First Inventor Defense Act of 1999.⁵⁰⁹ Application of the development limit would recover two limits that are neglected today: the reverse doctrine of equivalents and the experimental use defense. And the necessity limit would recommend the creation of a defense for public health emergencies.

1. *Existing Necessity Limits: Government Appropriation, Sovereign Immunity.* Pursuant to section 1498 of title 28 of the United States Code, patentees cannot enjoin *U.S. government appropriation* of their patents.⁵¹⁰ The statute grants a power similar to eminent

MAIL (Boston), Apr. 20, 2001, at B1 (noting that global music sales fell by half a billion dollars in 2000); Jeff Leeds, *Record Industry Says Napster Hurt Sales*, L.A. TIMES, Feb. 24, 2001, at C1 (noting that sales of CD singles declined nearly 40 percent in 2000).

508. See Wu, *supra* note 501, at 710 (noting disputes over the actual impact on the music industry of file-sharing programs such as Napster); *Shipping Product*, THE GUARDIAN (London), Sept. 27, 2002, at 27 (arguing that the availability of downloads increases music sales because “music fans [can] sample, for free, a variety of music that they would otherwise not have experienced”); Felix Oberholzer & Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis 3* (2004) (unpublished manuscript, on file with the *Duke Law Journal*) (concluding that “file sharing has only had a limited effect on record sales”).

509. 35 U.S.C. § 273 (2000).

510. The statute also applies to government contractors and agents and authorized representatives of the government. 28 U.S.C. § 1498(a) (2000); see also *id.* (preventing patentees

domain in allowing the government to perform necessary functions without being subject to holdups by individual owners.⁵¹¹ It provides that a patented invention can be “used or manufactured by or for the United States” without a license or right to use or manufacture.⁵¹² The patentee may seek recovery of “his reasonable and entire compensation for such use and manufacture”⁵¹³ in the U.S. Court of Federal Claims but is unable to enjoin the government’s appropriation.

Section 1498 was designed to apply in time of war.⁵¹⁴ The Supreme Court thus declared: “The intention and purpose of Congress . . . was to stimulate contractors to furnish what was needed for the war, without fear of becoming liable themselves for infringements to inventors or the owners or assignees of patents.”⁵¹⁵ To effectuate this goal, Congress “[took] away the right of the owner of the patent to recover from the contractor for infringements.”⁵¹⁶ Invocation of the statute is no longer limited to a wartime context: nearly three hundred cases based on section 1498 have been decided

from enjoining U.S. appropriation of their patents by government contractors, government agents, and authorized government representatives). *See generally* Lionel Marks Lavenue, *Patent Infringement Against the United States and Government Contractors Under 28 U.S.C. § 1498 in the United States Court of Federal Claims*, 2 J. INTELL. PROP. L. 389, 415 (1995) (explaining that the purpose of limiting a patentee’s remedy to suits against the United States for compensation is “to provide complete relief to a contractor from liability for any kind of patent infringement in manufacturing any item for the government”).

511. *See* B.E. Meyers & Co. v. United States, 47 Fed. Cl. 375, 380 (2000) (“Because the government has the right to use patented inventions for the public good, infringement by the government is treated as an exercise of eminent domain, rather than tortious conduct, as would be the case with private litigants.”).

512. 28 U.S.C. § 1498(a).

513. *Id.*

514. Colleen Chien, *Cheap Drugs at What Price to Innovation: Does the Compulsory Licensing of Pharmaceuticals Hurt Innovation?*, 18 BERKELEY TECH. L.J. 853, 863 (2003); *see also* Daniel R. Cahoy, *Treating the Legal Side Effects of Cipro(R): A Reevaluation of Compensation Rules for Government Takings of Patent Rights*, 40 AM. BUS. L.J. 125, 136 (2002) (“The use of government power to appropriate patents . . . allow[s] the government to acquire the tools necessary to wage war without fear that a patent property owner may refuse to sell or license an invention.”).

515. *Richmond Screw Anchor Co. v. United States*, 275 U.S. 331, 345 (1928); *see also* TVI Energy Corp. v. Blane, 806 F.2d 1057, 1060 (Fed. Cir. 1986) (“The Act was amended in 1918 at the behest of the Secretary of the Navy who cited difficulties in procuring goods from private manufacturers necessary to meet military requirements of World War I.”).

516. *Richmond Screw*, 275 U.S. at 345.

in the past fifty-five years, demonstrating a considerable limit on patents.⁵¹⁷

Several statutes now permit third parties to obtain compulsory licenses. The Atomic Energy Commission allows compulsory licensing for the civilian use of special nuclear material or atomic energy,⁵¹⁸ and the Clean Air Act recognizes compulsory licensing relating to emission requirements.⁵¹⁹ Patentees, moreover, cannot enforce patents for medical procedures against health professionals.⁵²⁰

Compulsory licensing also has been employed as a remedy. Courts have refused to issue injunctions in the contexts of medical need, public sanitation, and transportation disruptions.⁵²¹ For example, the Seventh Circuit in *City of Milwaukee v. Activated Sludge*⁵²² refused to issue a permanent injunction that would have prohibited Milwaukee from operating its sewage plant and would have forced it to dump raw sewage into Lake Michigan.⁵²³ And both the Department of Justice and the Federal Trade Commission have

517. See Chien, *supra* note 514, at 863 (noting that the current statute was enacted in 1948 and that the figure of three hundred cases understates the use of compulsory licenses “because it excludes cases resolved without litigation and infringement that goes unnoticed by the patentee”).

518. 42 U.S.C. § 2183(c) (2000).

519. *Id.* § 7608; see also Chien, *supra* note 514, at 864 n.41 (discussing statutory and de facto compulsory licensing schemes).

520. See 35 U.S.C. § 287(c) (2000) (stating that remedies available for patent infringement “shall not apply against the medical practitioner” who is “perform[ing] . . . a medical activity that constitutes an infringement”). See generally Dan L. Burk, *Patenting Speech*, 79 TEX. L. REV. 99, 159 (2000) (discussing the statutory exception that precludes enforcement against health professionals’ unauthorized use of patents). In addition, the National Institutes of Health (NIH) has stated that, “[a]s a government agency, [it] may use and manufacture any patented invention . . . and authorize its use and manufacture by others for the United States, without a license.” REP. OF THE NAT’L INSTS. OF HEALTH (NIH) WORKING GROUP ON RESEARCH TOOLS, ANALYSIS OF NIH OPTIONS UNDER CURRENT LAW, at <http://www.nih.gov/news/researchtools/index.htm> (June 4, 1998) [hereinafter NAT’L INSTS. OF HEALTH] (on file with the *Duke Law Journal*); see Cahoy, *supra* note 514, at 136 n.47 (explaining that the NIH report serves to decrease government’s “barriers to using biomedical research tools that are the subject of U.S. patents”).

521. See *Vitamin Technologists, Inc. v. Wis. Alumni Research Found.*, 146 F.2d 941, 945 (9th Cir. 1944) (affirming the denial of an injunction that would have prevented the irradiation of oleomargarine and invalidating the patent for the irradiation process on other grounds); *Nerney v. New York*, 83 F.2d 409, 411 (2d Cir. 1936) (affirming the denial of an injunction that would have disrupted rail service); *City of Milwaukee v. Activated Sludge, Inc.*, 69 F.2d 577, 593 (7th Cir. 1934) (preventing the dumping of sewage into Lake Michigan); *Hybritech Inc. v. Abbott Labs.*, 4 U.S.P.Q.2d (BNA) 1001, 1015 (C.D. Cal. 1987) (refusing to eliminate public access to test kits for cancer and hepatitis); see also Burk, *supra* note 520, at 158–59 (providing examples).

522. 69 F.2d 577 (7th Cir. 1934).

523. *Id.* at 593.

ordered compulsory licensing as a condition of antitrust consent decrees and merger approvals.⁵²⁴

State sovereign immunity applies to patent infringement actions, reflecting another necessity limit on patents.⁵²⁵ The Court in *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank*⁵²⁶ rejected Congress's attempt to abrogate Florida's immunity for patent infringement.⁵²⁷ This result has been criticized, and any necessity connection is best understood in light of the Supreme Court's expansive sovereign immunity jurisprudence.⁵²⁸ Nonetheless,

524. *E.g.*, *United States v. Glaxo Group, Ltd.*, 410 U.S. 52, 64 (1973); *United States v. Nat'l Lead Co.*, 332 U.S. 319 (1947); *In re Ciba-Geigy Ltd.*, 123 F.T.C. 842, 842 (1997); *In re Baxter Int'l Inc.*, 123 F.T.C. 904, 920–21 (1997); *see also* F.M. SCHERER, *THE ECONOMIC EFFECTS OF COMPULSORY PATENT LICENSING* 86–87 (N.Y. Univ., Ctr. for the Study of Fin. Insts., Monograph Series in Fin. & Econ. No. 1977-2, 1977) (arguing that compulsory licensing “would mitigate patent-related tendencies toward the unjustified persistence of monopoly power” while avoiding “appreciable incentive-dampening consequences”); Kurt M. Saunders, *Patent Nonuse and the Role of Public Interest As a Deterrent to Technology Suppression*, 15 HARV. J.L. & TECH. 389, 447 (2002) (“[A] long-term approach to the problem of patent suppression should involve the use of compulsory licensing, whereby a court would order a patentee that is not using its patent to license the patent to another who will make use of it.”); Lawrence Schlam, *Compulsory Royalty-Free Licensing as an Antitrust Remedy for Patent Fraud: Law, Policy and the Patent-Antitrust Interface Revisited*, 7 CORNELL J.L. & PUB. POL'Y 467, 470 (1998) (“Compulsory licensing decrees have been common . . . where corporations have misused patent rights in restraint of trade.”).

525. *See* U.S. CONST. amend. XI (“The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.”); *Hans v. Louisiana*, 134 U.S. 1, 15–16 (1890) (holding that sovereign immunity prevented suits by citizens against their state in federal court).

526. 527 U.S. 627 (1999).

527. *Id.* at 646–48. Congress unsuccessfully attempted to abrogate state sovereign immunity through the Patent and Plant Variety Protection Remedy Clarification Act, Pub. L. No. 102-560, 106 Stat. 4230 (1992) (codified as amended at 35 U.S.C. § 271(h) (2000)). Because the Court had removed Article I abrogation authority in *Seminole Tribe v. Florida*, 517 U.S. 44, 72–73 (1996), Congress could not rely on the Intellectual Property or Commerce Clauses to abrogate sovereign immunity with respect to patent infringement. Consequently, Congress based the statute on the Due Process Clause, which the Court found invalid because the Patent Remedy Act did not “respond to a history of ‘widespread and persisting deprivation of constitutional rights’ of the sort Congress has faced in enacting proper prophylactic § 5 legislation.” *Fla. Prepaid*, 527 U.S. at 645 (quoting *City of Boerne v. Flores*, 521 U.S. 507, 526 (1997)); *see also* Mitchell N. Berman et al., *State Accountability for Violations of Intellectual Property Rights: How to “Fix” Florida Prepaid (And How Not to)*, 79 TEX. L. REV. 1037, 1062 (2001) (noting only eight patent infringement suits against state governments between 1880 and 1990).

528. *See* 145 CONG. REC. S8069, S8070 (daily ed. July 1, 1999) (statement of Sen. Leahy) (lamenting the existence of “one law for private universities, libraries and educational institutions” and another for “State-run institutions”); *Florida Prepaid v. College Savings*, COPYRIGHT L.J., July–Aug. 1999, at 50, 52 (lamenting the “bad decision,” which upheld states’ rights over “200 years of uniform, settled law”); Daniel J. Meltzer, *State Sovereign Immunity*:

there is no dispute that the immunization of state institutions from patent infringement lawsuits represents an additional limit on patent rights.

2. *Existing Equity Limits: Inequitable Conduct, Prosecution Laches, Patent Misuse, Exhaustion, Implied License, Repair, Estoppel Limits on the Doctrine of Equivalents, First Inventor Defense.* Courts and Congress have recognized a wide array of equitable defenses to patent rights, including inequitable conduct, prosecution laches, patent misuse, exhaustion, implied license, repair, estoppel, and prior use of business method patents.

Inequitable conduct before the U.S. Patent and Trademark Office (PTO) results in the “ultimate sanction” of total unenforceability.⁵²⁹ Such a harsh remedy is invoked because of the dangerous consequences of such conduct, which stem from the ex parte nature of patent prosecution and the difficulties of searching for information known in the field (prior art).⁵³⁰ Inequitable conduct typically takes the form of a failure to disclose material information,⁵³¹ although it also includes the submission of false material information, false statements relating to the date, use, or sale of invention, and false data relating to comparative testing and embodiment examples.⁵³²

The two-step analysis that the Federal Circuit employs in analyzing claims of inequitable conduct underscores the equitable nature of the defense. The court first determines whether the information omitted or falsified is material and whether a deceptive intent has been shown.⁵³³ Second, in balancing these factors, the court,

Five Authors in Search of a Theory, 75 NOTRE DAME L. REV. 1011, 1056 (2000) (criticizing the decision).

529. ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 1216 (3d ed. 2002); *see also* CHISUM ET AL., *supra* note 120, at 1050 (describing the defense of inequitable conduct as “harsh” because it “renders all the claims of the asserted patent unenforceable for the life of the patent”).

530. *See* HOVENKAMP ET AL., *supra* note 432, § 2.2d2, at 2-22 to 2-23 (discussing the opportunities for patent applicants to exploit the process). The difficulties of searching for prior art are compounded by the time pressures facing patent examiners. *See supra* note 46.

531. HOVENKAMP ET AL., *supra* note 432, § 2.2d2(A), at 2-23.

532. MERGES & DUFFY, *supra* note 529, at 1229.

533. *Akron Polymer Container Corp. v. Exxel Container, Inc.*, 148 F.3d 1380, 1383 (Fed. Cir. 1998). The Federal Circuit has adopted the standard of materiality promulgated in Patent and Trademark Office Rule 56, which, in addition to requiring of patent applicants and others assisting them “a duty of candor and good faith,” mandates “a duty to disclose . . . all information known to that individual to be material to patentability.” PTO National Prosecution

in “the sound exercise of its equitable discretion,”⁵³⁴ determines whether there has been inequitable conduct.⁵³⁵

Related to the notion of inequitable conduct is that of fraudulent procurement of a patent. This category imposes a higher burden on a plaintiff than does inequitable conduct in that a fraudulent procurement claim requires “but for” materiality⁵³⁶ and imposes higher thresholds for finding intent and materiality.⁵³⁷ As the Supreme Court has explained, a finding of fraudulent procurement “strip[s] the patentee] of its exemption from the antitrust laws,”⁵³⁸ providing yet additional limits on the patentee.

The equitable doctrine of *prosecution laches*, by making certain patents unenforceable, limits the practice of “submarine patenting.” Submarine patenting occurs when patent applicants continually amend their applications over a lengthy period, incorporating the latest technology that embraces competitors’ innovations and covers industry-standard products.⁵³⁹ For example, Jerome Lemelson (a notorious abuser of the strategy) applied in 1954 and 1956 for patents on machine vision and automatic identification technology (such as bar codes) and amended them for approximately thirty years, ultimately surfacing with a patent that included the latest technological advances and that he used to pressure companies to obtain licenses.⁵⁴⁰

Provisions, 37 C.F.R. § 1.56(a) (2004). “[I]nformation is material to patentability when it is not cumulative to information already of record or being made of record in the application, and . . . [i]t refutes, or is inconsistent with, a position the applicant takes in . . . [a]sserting an argument of patentability.” *Id.* § 1.56(b)(2)(ii). For a discussion of the expanding notion of materiality, see MERGES & DUFFY, *supra* note 529, at 1236.

534. *Akron Polymer Container Corp.*, 148 F.3d at 1383.

535. *Id.*

536. This standard of materiality signifies that “the patent would not have issued ‘but for’ the omission.” *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1070 (Fed. Cir. 1998) (quoting *United States v. Ciba-Geigy Corp.*, 508 F. Supp. 1157, 1170 (D.N.J. 1979)).

537. See HOVENKAMP ET AL., *supra* note 432, § 2.2d2(E), at 2-26.

538. *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 177 (1965).

539. Timothy R. DeWitt, *Does Supreme Court Precedent Sink Submarine Patents?*, 38 IDEA 601, 601 (1998) (arguing that submarine patents “often leave entire industries scrambling for a defense because the long pendency of the applications permits the applicants to write claims that directly cover industry-standard products”).

540. Nicholas Varchaver, *The Patent King*, FORTUNE, May 14, 2001, at 202 (explaining how Lemelson made hundreds of millions of dollars off these submarine patents); Bernie Knill, *Setback for Lemelson*, 57 MATERIAL HANDLING MGMT., Aug. 2002, at 27 (“Lemelson signed up hundreds of bar code and machine vision users to contracts for licenses to use his patents. Big users . . . figured that the cost of a license was less than the cost of contesting and certainly less than the penalty for patent infringement.”).

In *Symbol Technologies, Inc. v. Lemelson Medical, Education & Research Foundation, L.P.*,⁵⁴¹ the Federal Circuit found that the doctrine of prosecution laches barred Lemelson's infringement claims because his patents had issued "after an unreasonable and unexplained delay in prosecution."⁵⁴² The doctrine of prosecution laches has lost some significance in light of the change in patent term from seventeen years after issuance to twenty years after filing, which has decreased the effectiveness of submarine patents for applications filed after June 1995.⁵⁴³ Nonetheless, the doctrine serves as another example of an equity limit on patents.⁵⁴⁴

Patent misuse is an equitable doctrine that courts created to prevent patentees from "misusing" their patents.⁵⁴⁵ In particular, it encompasses activity that constitutes an antitrust violation as well as "the expansion of patent rights beyond their lawful scope."⁵⁴⁶ The remedy for patent misuse is nonenforcement until the patent owner terminates the misuse.⁵⁴⁷

Two types of activity constitute per se patent misuse: (1) "'tying' arrangements in which a patentee conditions a license under the patent on the purchase of a separable, staple good"⁵⁴⁸ and (2)

541. 277 F.3d 1361 (Fed. Cir. 2002).

542. *Id.* at 1363; *see also, e.g.*, *Webster Elec. Co. v. Splitdorf Elec. Co.*, 264 U.S. 463, 466 (1924) (finding that an eight-year delay was "unreasonable" and "constitute[d] laches"); *Woodbridge v. United States*, 263 U.S. 50, 56 (1923) (finding that a nine-and-a-half-year delay presented a "case of forfeiting the right to a patent by designed delay").

543. *See* Uruguay Round Agreements Act, Pub. L. No. 103-465, § 532(a)(1), 108 Stat. 4809, 4983 (codified as amended at 35 U.S.C. § 154 (2000)) (changing the patent term to "a term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed in the United States").

544. *See* Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 92-93 (2004) ("Called 'prosecution laches,' the defense renders unenforceable patents that spent an unreasonable amount of time in prosecution without sufficient explanation, and permits the PTO to reject applications that have been unreasonably delayed by the applicant.").

545. MERGES ET AL., *supra* note 13, at 280; *see* Mark A. Lemley, Comment, *The Economic Irrationality of the Patent Misuse Doctrine*, 78 CAL. L. REV. 1599, 1608-09, 1615 n.107 (1990) (explaining that the doctrine developed as an equitable defense to infringement claims and bears some resemblance to the "unclean hands" doctrine of tort law).

546. HOVENKAMP ET AL., *supra* note 432, § 3.2b, at 3-7; *see also* *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971) (noting that "the Court has condemned attempts to broaden the physical or temporal scope of the patent monopoly").

547. *See* *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1372 (Fed. Cir. 1998) ("[A] holding of misuse renders the patent unenforceable until the misuse is purged; it does not, of itself, invalidate the patent.").

548. *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 869 (Fed. Cir. 1997); *see also, e.g.*, *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 491 (1942) (finding patent misuse when the

arrangements by which a patentee extends the patent beyond its expiration date.⁵⁴⁹ Other practices constitute misuse only after a more detailed inquiry, by which the courts determine if the challenged practice “is ‘reasonably within the patent grant’”⁵⁵⁰ (and thus does not constitute misuse) or “has the effect of extending the patentee’s statutory rights and does so with an anti-competitive effect”⁵⁵¹ (and is misuse).⁵⁵² Misuse has encompassed grant-back clauses,⁵⁵³ concerted price-fixing activity,⁵⁵⁴ noncompetition agreements,⁵⁵⁵ and “double dipping.”⁵⁵⁶

patent holder used the patent “to suppress competition in the sale of an unpatented article”). Congress limited the scope of the per se category of tying offenses in the Patent Misuse Reform Act of 1988 by requiring the patentee to have market power in the tying product market for misuse to apply. *See* 35 U.S.C. § 271(d)(5) (2000) (stating that “condition[ing] the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product” does not constitute patent misuse, “unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned” (emphasis added)).

549. *E.g.*, *Brulotte v. Thys Co.*, 379 U.S. 29, 32 (1964); *Va. Panel Corp.*, 133 F.3d at 869; HOVENKAMP ET AL., *supra* note 432, § 3.3b3, at 3-24.

550. *Va. Panel Corp.*, 133 F.3d at 869 (quoting *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 708 (Fed. Cir. 1992)).

551. *Va. Panel Corp.*, 133 F.3d at 869.

552. Courts analyzing anticompetitive effects under the “rule of reason” consider “specific information about the relevant business, its condition before and after the restraint was imposed, and the restraint’s history, nature, and effect.” *Id.* (citing *State Oil Co. v. Khan*, 522 U.S. 3, 10 (1997)).

553. *See* *Transparent-Wrap Mach. Corp. v. Stokes & Smith Co.*, 329 U.S. 637, 646 (1947) (noting the “possibilities of abuse” in grant-back clauses). “A grantback is an arrangement under which a licensee agrees to extend to the licensor of intellectual property the right to use the licensee’s improvements to the licensed technology.” U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 5.6 (1995). *See generally* HOVENKAMP ET AL., *supra* note 432, § 3.3b4, at 3-27 to 3-29 (“A patentee that has licensed its patent to an entire industry may be able to use grantback clauses to maintain control of that industry, both by restricting incentives to improve the product and by building a patent portfolio that includes those improvements that do occur.”).

554. *See* *United States v. U.S. Gypsum Co.*, 333 U.S. 364, 401 (1948) (“[I]t would be sufficient [for purposes of finding improper conduct] to show that the defendants, constituting all former competitors in an entire industry, had acted in concert to restrain commerce in an entire industry under patent licenses in order to organize the industry and stabilize prices.”). *See generally* HOVENKAMP ET AL., *supra* note 432, § 3.3b6, at 3-30 to 3-33 (stating that “patent licensing schemes are illegal where they are used as part of a broader effort to fix prices and restrict competition”).

555. *See* *Nat’l Lockwasher Co. v. George K. Garrett Co.*, 137 F.2d 255, 257 (3d Cir. 1943) (holding that a patentee could not prevent licensees from manufacturing non-patented goods similar to those covered under the license).

556. *See* *PSC Inc. v. Symbol Techs.*, 26 F. Supp. 2d 505, 511 (W.D.N.Y. 1998) (finding misuse in “the collection of two royalties on the same product under the same patents”). Double dipping involves “collecting royalties from two different parties on the same products and

The Federal Circuit has narrowed the reach of the patent misuse doctrine in recent years⁵⁵⁷ and has upheld application of the defense in only one case, in 1986.⁵⁵⁸ Moreover, the court's incorporation of antitrust standards into determinations of misuse⁵⁵⁹ reduces the independent potency of the defense. Nonetheless, there is still at least a potential role for the defense—particularly when an activity does not rise to the level of an antitrust violation—ensuring that patent misuse demonstrates an equity-based limit on patents.

Equitable limits related to patent misuse are the *exhaustion* (or *first sale*), *implied license*, and *repair* doctrines. The exhaustion doctrine provides that, after selling or licensing a patented product, a patentee loses control over goods embodying the patent.⁵⁶⁰ Equitable estoppel leads to an implied license when patentees seek to enforce their patents after engaging in misleading conduct suggesting that they would not do so.⁵⁶¹ The repair doctrine allows a buyer to repair

patents at two different stages of production.” HOVENKAMP ET AL., *supra* note 432, § 3.3b8, at 3-35.

557. See HOVENKAMP ET AL., *supra* note 432, § 3.2a, at 3-6 (noting that the court has imposed new hurdles on accused infringers seeking to show misuse and has limited misuse to activity violating the antitrust laws).

558. See *id.* (“[T]he Federal Circuit has found misuse only once since its creation, in *Senza-Gel Corp. v. Seiffhart*, [803 F.2d 661, 669 (Fed. Cir. 1986).] and has rejected misuse claims on more than a dozen occasions.”).

559. See *Va. Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 869 (Fed. Cir. 1997) (“Patent misuse is an affirmative defense to an accusation of patent infringement, the successful assertion of which ‘requires that the alleged infringer show that the patentee has impermissibly broadened the ‘physical or temporal scope’ of the patent grant with anticompetitive effect.’” (quoting *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1001 (Fed. Cir. 1986) (quoting *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 343 (1971))). For criticism of a patent misuse defense that applies more expansively than its antitrust counterpart, see Judge Posner’s opinion in *USM Corp. v. SPS Technology, Inc.*, 694 F.2d 505 (7th Cir. 1982), explaining that “[o]ur law is not rich in . . . concepts of monopolistic abuse [apart from antitrust principles]; and it is rather late in the day to try to develop one without in the process subjecting the rights of patent holders to debilitating uncertainty.” *Id.* at 512.

560. MERGES ET AL., *supra* note 13, at 286. The Federal Circuit has lessened the viability of the doctrine. See *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426–27 (Fed. Cir. 1997) (explaining that the exhaustion doctrine “does not apply to an expressly conditional sale or license”); *Mallinckrodt, Inc. v. MediPart, Inc.*, 976 F.2d 700, 709 (Fed. Cir. 1992) (holding that a patentee could prevent doctors from reusing a patented device if the patentee’s label restriction indicated that the device was for a single use); MERGES ET AL., *supra* note 13, at 286–87 (noting the “serious doubt” cast “on the modern efficacy of the exhaustion doctrine”). The doctrine also is consistent with a limit based on necessity.

561. See *Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc.*, 103 F.3d 1571, 1582 (Fed. Cir. 1997) (holding that the alleged infringer “properly inferred consent” to its use of the patents when the patentee “tried to coax [the alleged infringer] into [a] market, . . . provided designs, suggestions, and samples and eventually purchased [the invention] from [the alleged infringer]”).

(but not reconstruct) an article that has a patented input.⁵⁶² Each of these three related doctrines prevents patentees from exercising rights after selling or licensing patented articles. The limits recall property law doctrines, with exhaustion similar to the prohibition of restraints on alienation⁵⁶³ and equitable estoppel reflecting the rationales of doctrines such as that governing boundary line disputes.⁵⁶⁴

Several equity-based *limits cabin the reach of the doctrine of equivalents*. This doctrine allows patentees to enforce their patents not only against devices covered by the literal language of a claim but also against equivalents. It prevents “the unscrupulous copyist [from making] unimportant and insubstantial changes and substitutions in the patent . . . [that] take the copied matter outside the claim, and hence outside the reach of law.”⁵⁶⁵ Three equitable limits restrict the range of equivalents that a patentee can invoke: prior art, prosecution history estoppel, and dedication to the public.

The *prior art limitation* prevents a patentee from enforcing a conception of equivalence that would allow a claim to encompass prior art, or information previously known in the field.⁵⁶⁶ Prior art, in preventing the issuance of a patent, “always limits what an inventor could have claimed [and thus] limits the range of permissible equivalents of a claim.”⁵⁶⁷ The rationale for this exception, as the Federal Circuit has explained, is equitable in nature: “[A] patentee should not be able to obtain, under the doctrine of equivalents,

562. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 346 (1961); *Wilson v. Simpson*, 50 U.S. (9 How.) 109, 124 (1850); *CHISUM ET AL.*, *supra* note 120, at 1130. For a discussion of the muddled line between permissible repair and impermissible reconstruction, see *id.* at 1130–33; Mark D. Janis, *A Tale of the Apocryphal Axe: Repair, Reconstruction, and the Implied License in Intellectual Property Law*, 58 MD. L. REV. 423, 424 (1999).

563. See *supra* notes 254–57 and accompanying text.

564. See *supra* note 344 and accompanying text.

565. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950); see also *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) (“If patents were always interpreted by their literal terms, their value would be greatly diminished. Unimportant and insubstantial substitutes for certain elements could defeat the patent, and its value to inventors could be destroyed by simple acts of copying.”).

566. *HOVENKAMP ET AL.*, *supra* note 432, § 2.2c2(B), at 2-19 to 2-20.

567. *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 684 (Fed. Cir. 1990); see also, e.g., *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136 (1942) (observing that the patentee had narrowed his claim to satisfy the PTO’s prior art objections); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 n.1 (Fed. Cir. 1987) (“The doctrine of equivalents is limited in that the doctrine will not extend . . . to cover an accused device in the prior art . . .”).

coverage which he could not lawfully have obtained from the PTO by literal claims.”⁵⁶⁸

A broader variation of the prior art limitation is *prosecution history estoppel*.⁵⁶⁹ This doctrine provides that patentees who narrow their claims in response to a rejection by a PTO examiner should not subsequently be permitted to argue that “the subject matter covered by the original, broader claim was nothing more than an equivalent.”⁵⁷⁰ In particular, in narrowing an application, an applicant cannot claim that the surrendered territory was “unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent.”⁵⁷¹ The Supreme Court has held that “a[ny] narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel”⁵⁷² and that a patentee must “bear the burden of showing that the amendment does not surrender the particular equivalent in question,” by, for example, showing that the equivalent was unforeseeable.⁵⁷³

The third equitable limit on the doctrine of equivalents is *dedication to the public*. A patent applicant who discloses subject matter in the specification but not in the patent claims “dedicates that unclaimed subject matter to the public.”⁵⁷⁴ The reason, again, is equitable: because the decision to issue a patent is based on the patentee’s claims, “a patentee cannot narrowly claim an invention to avoid prosecution scrutiny by the PTO, and then, after [the] patent

568. *Wilson Sporting Goods*, 904 F.2d at 684; see generally HOVENKAMP ET AL., *supra* note 432, § 2.2c2(B), at 2-19 to 2-20 (discussing the prior art limitations of the doctrine of equivalents).

569. Prosecution history refers to the record of PTO proceedings related to the issuance of a given patent. See, e.g., *Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (noting that prosecution history “contains the complete record of all the proceedings before the Patent and Trademark Office, including any express representations made by the applicant regarding the scope of the claims”); see also R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of Festo*, 151 U. PA. L. REV. 159 (2002) (urging an expansive use of the doctrine).

570. *Festo*, 535 U.S. at 727.

571. *Id.* at 733–34.

572. *Id.* at 736.

573. *Id.* at 740–41 (explaining that an amendment also would not surrender particular equivalents when there exists a merely “tangential relation” between the reason for the amendment and the equivalent at issue or “any other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question”).

574. *Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc); accord *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1562–63 (Fed. Cir. 1991). A specification describes the invention and how to make and use it. 35 U.S.C. § 112 (2000).

[has been] issu[ed], use the doctrine of equivalents to establish infringement” by relying on equivalents disclosed in the specification.⁵⁷⁵

The *First Inventor Defense Act of 1999*⁵⁷⁶ instituted a form of prior user rights protecting inventors of “method[s] of doing or conducting business.”⁵⁷⁷ After the Federal Circuit found business methods patentable in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*,⁵⁷⁸ Congress was concerned that prior inventors of business methods would not be able to patent their inventions because of public use in excess of one year⁵⁷⁹ and would find it “administratively and economically impossible”⁵⁸⁰ to apply for patents “on all methods and processes now deemed patentable.”⁵⁸¹ In response to these concerns, the Act offered a defense to infringement actions for prior inventors who reduced their inventions to practice at least one year before, and used the method commercially before, the filing date.⁵⁸² The defense is equitable in nature, recognizing the

575. *Johnson & Johnston Assocs.*, 285 F.3d at 1054; see also *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1424–25 (Fed. Cir. 1997) (discussing the public’s right to rely on limitations of claims to avoid infringement); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1107 (Fed. Cir. 1996) (emphasizing that allowing such a maneuver “would merely encourage a patent applicant to present a broad disclosure in the specification of the application and file narrow claims, avoiding examination of broader claims that the applicant could have filed consistent with the specification”).

576. 35 U.S.C. § 273 (2000).

577. *Id.* § 273(a)(3). Under the Act, the term “methods” is construed broadly and would include a “method for doing or conducting business that has been claimed in a patent as a programmed machine, as in the State Street case, . . . if the invention could have as easily been claimed as a method.” 145 CONG. REC. E1788, E1789 (1999) (statement of Rep. Coble); see also *id.* (“The first inventor defense . . . applies to any industry which relies on trade secrecy for protecting methods for doing or conducting the operations of their business.”). See generally Richard Neifeld, *Analysis of the New Patent Laws Enacted November 29, 1999*, 82 J. PAT. & TRADEMARK OFF. SOC’Y 181, 197 (2000) (“The legislative history provides an extremely broad definition of ‘method.’”).

578. 149 F.3d 1368 (Fed. Cir. 1998).

579. 35 U.S.C. § 102(b) (precluding the award of a patent for an invention “in public use or on sale in this country, more than one year prior to the date of the [patent] application”).

580. 145 CONG. REC. at E1789 (statement of Rep. Coble).

581. *Id.* See generally Scott M. Alter, *The Effects of State Street: The Year-and-a-Half in Review*, in *PATENTING THE NEW BUSINESS MODEL: BUILDING FENCES IN CYBERSPACE* 59, 71–72 (PLI Intellectual Prop. Course Handbook Series No. G-589, 2000) (discussing the business practice of keeping methods secret even when believed unpatentable).

582. 35 U.S.C. § 273(b)(1). In addition, the prior inventor cannot license the invention, *id.* § 273(b)(3)(C), and can only assign the invention with the enterprise or line of business, *id.* § 273(b)(7). See also A. Samuel Oddi, *The Tragicomedy of the Public Domain in Intellectual Property Law*, 25 HASTINGS COMM. & ENT. L.J. 1, 39 n.105 (2002) (discussing limits on the applicability of the first inventor defense).

unfairness of barring a prior inventor (who did not seek a patent, thinking the invention unpatentable) from obtaining a patent.⁵⁸³

3. *Recovered Development Proposals: Reverse Doctrine of Equivalents, Experimental Use.* The reverse doctrine of equivalents (RDOE) allows an improver to escape liability for literal infringement if the improver “has so far changed the principle of the device that the claims of the patent, literally construed, have ceased to represent his actual invention.”⁵⁸⁴ In *Westinghouse v. Boyden Power Brake Co.*,⁵⁸⁵ for example, the Supreme Court applied the RDOE to excuse an improver’s literal infringement of a patent for a train brake because the improver’s brake was so much more effective that it allowed longer trains to operate.⁵⁸⁶ Similarly, in *Scripps Clinic & Research Foundation v. Genentech, Inc.*,⁵⁸⁷ the Federal Circuit, in reversing a grant of summary judgment, found that the defense could have applied when the improver produced the same blood protein as the initial inventor, but in a less expensive and more commercially significant form.⁵⁸⁸

The RDOE has proven to be more important in theory than in practice, however. Courts have applied the RDOE to excuse infringement very rarely, and not in the past century.⁵⁸⁹ The Federal Circuit has never applied the doctrine to excuse infringement, and it recently criticized the defense.⁵⁹⁰

583. David H. Hollander, Jr., *The First Inventor Defense: A Limited Prior User Right Finds Its Way into U.S. Patent Law*, 30 AIPLA Q.J. 37, 88–89 (2002).

584. *Westinghouse v. Boyden Power Brake Co.*, 170 U.S. 537, 568 (1898); see also *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608–09 (1950) (stating that improvement can avoid infringement, even if it “falls within the literal words of the claim,” so long as it “is so far changed in principle from a patented article that it performs the same or a similar function in a substantially different way”), *superseded on other grounds by* 35 U.S.C. § 112. The purpose of the doctrine is “to prevent unwarranted extension of the claims beyond a fair scope of the patentee’s invention.” *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1581 (Fed. Cir. 1991).

585. 170 U.S. 537 (1898).

586. *Id.* at 572.

587. 927 F.2d 1565 (Fed. Cir. 1991).

588. *Id.* at 1581. The improver offered a recombinant DNA form, as opposed to a form purified from human blood. *Id.* at 1581; see also Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 93 (1994) (“[T]he potential use of the reverse equivalent doctrine [can] limit the reach of a patentee’s claims in the face of substantial technological improvements.”).

589. MERGES ET AL., *supra* note 13, at 264.

590. See *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1368 (Fed. Cir. 2002) (finding “good reason” for “[n]ot once . . . [having] affirmed a decision finding

But perhaps the RDOE should have a greater role in promoting development that occurs through multigenerational innovation. Professor Robert Merges envisions the use of the defense to resolve licensing bottlenecks between pioneers and improvers.⁵⁹¹ In particular, he focuses on arrangements involving the “radical improver,” who is “the source of very high profits,” in contrast to the pioneer’s “much lower profits.”⁵⁹² Because licensing arrangements would lead to substantial social welfare gains, Professor Merges encourages courts more frequently to utilize the RDOE, which, in threatening pioneer patentees, would foster such arrangements.⁵⁹³

In contexts in which innovation proceeds through radical improvements, the RDOE should play a more prominent role than it currently does in excusing literal infringement that nonetheless contributes substantially to innovation. Because innovation takes place in markedly different ways in different industries, the relevant industry would play a role in determining whether the defense would apply. In the biotechnology and pharmaceuticals industries, for example, the costs and risks of creation are so significant, and the discoveries often so revolutionary, that the defense should be available to the radical improver.⁵⁹⁴ In industries in which innovation

noninfringement based on the reverse doctrine of equivalents). *But see* Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1351 (Fed. Cir. 2003) (considering the doctrine).

591. The bottlenecks arise from differences in valuation and uncertainty over the development of future technology. *See* Merges, *supra* note 588, at 75 (noting the difficulty in valuing the contributions of pioneers and improvers and the “immense uncertainty over the technology’s future development path and profitability”). Examples of the holdup problem include the delayed development of radio, *id.* at 84–85, the slower development of improvements in the artificial lighting industry after Thomas Edison obtained a patent encompassing the use of a carbon filament, and the reduced pace of aircraft development after the Wright brothers patented an expansive airplane stabilization and steering system, Merges & Nelson, *supra* note 197, at 885–91.

592. Merges, *supra* note 588, at 79; *see also* Lemley, *supra* note 30, at 1012–13 (noting that the RDOE “benefits radical improvers at the expense of the original patentee, and so encourages radical improvements”). Professors Merges and Nelson explain that the holdup problem is likely to be significant when most of the value comes from improvements because the pioneer can seek “to extract much of the value of the ‘original plus improvement’ combination from the improver.” Merges & Nelson, *supra* note 197, at 865–66. The RDOE solves the holdup problem “by . . . excusing the improver from infringement liability—and therefore removing the original patentee’s holdup right.” *Id.* at 866.

593. Merges, *supra* note 588, at 76, 94.

594. *See supra* note 154 and accompanying text; *see also* Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1652 (2003) (noting that inventions that are significant advances occur more often in the pharmaceuticals and biotechnology industries). Of course, the difficulties of creation apply to the initial product as well, and so the defense must be applied with caution.

proceeds in more incremental steps, such as the computer software industry, there would be less need for the RDOE.⁵⁹⁵ Although the RDOE would not apply frequently, it could serve as a limit on patent rights that, in recognizing radical improvements, would foster development in the form of new and improved products spanning multiple generations.⁵⁹⁶

The defense of *experimental use*, another development limit on patent rights, has traditionally excused infringement when patented inventions are used for scientific inquiry.⁵⁹⁷ In the first case to recognize the defense, *Whittemore v. Cutter*,⁵⁹⁸ Justice Story explained that “it could never have been the intention of the legislature to punish a man, who constructed such a machine merely for philosophical experiments, or for the purpose of ascertaining the sufficiency of the machine to produce its described effects.”⁵⁹⁹

In recent years, however, the Federal Circuit has drastically narrowed the scope of the experimental use exception. In *Roche Products, Inc. v. Bolar Pharmaceutical Co.*,⁶⁰⁰ the court found that the defendant’s use of a patented drug to conduct tests for Food and Drug Administration (FDA) approval to market generic drugs was “solely for business reasons and not for amusement, to satisfy idle

595. See *supra* notes 193–96 and accompanying text.

596. A more robust RDOE also gains support from the property doctrine of easement by necessity, which provides that landowners’ interest in accessing and exiting their land is important enough to warrant encroachment upon the right to exclude. Of course, the interests in allowing the application of the RDOE will vary in significance, with most conceivable applications not rising to the level of importance of accessing one’s land. But one can imagine certain pharmaceutical products, for example, playing a crucial role in public health. For a discussion of another exception that could apply in the area of pharmaceuticals, one that is based on necessity and that applies in the context of public health emergencies, see Part IV.B.4, *infra*.

597. E.g., MERGES ET AL., *supra* note 13, at 274.

598. 29 F. Cas. 1120 (C.C.D. Mass. 1813) (No. 17,600).

599. *Id.* at 1121. In addition to the judicial exception, there is a statutory experimental use defense. Pursuant to the Drug Price Competition and Patent Term Restoration Act of 1984, 35 U.S.C. § 271 (2000), generic drug makers are exempt from infringement for making, selling, or using a patented invention “solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs.” *Id.* § 271(e)(1). See generally CHISUM ET AL., *supra* note 120, at 1204–07 (discussing the history and construction of the statute). There is also an experimental use exception to the on-sale and public use bars of section 102(b) that excuses use in excess of one year, see *City of Elizabeth v. Pavement Co.*, 97 U.S. 126 (1877), which I do not discuss in detail because the requirements for patentability that the exception affects are beyond the scope of the Article.

600. 733 F.2d 858 (Fed. Cir. 1984), *superseded on other grounds by* 35 U.S.C. § 271(e).

curiosity, or for strictly philosophical inquiry.”⁶⁰¹ The court explained that “unlicensed experiments conducted with a view to the adaption of the patented invention to the experimenter’s business”⁶⁰² violate a patentee’s right to exclude.⁶⁰³ Similarly, the court in *Embrex, Inc. v. Service Engineering Corp.*⁶⁰⁴ refused to uphold the defense of experimental use when a party designed around a patent for “definite, cognizable, and not insubstantial commercial purposes.”⁶⁰⁵ The court further confined the “very narrow and strictly limited”⁶⁰⁶ exception in *Madey v. Duke University*⁶⁰⁷ by treating university research as commercial in nature and explaining that research “unmistakably further[s] the institution’s legitimate business objectives, including educating and enlightening students and faculty participating in these projects.”⁶⁰⁸

The experimental use defense has been interpreted out of existence when the only uses that remain are “for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry.”⁶⁰⁹ A stronger experimental use defense would promote development. It would allow researchers to verify “the adequacy of the specification and the validity of the patent holder’s claims about the invention,”⁶¹⁰ to determine how the invention worked,⁶¹¹ and to engage in comparative testing against the patented invention to determine if

601. *Id.* at 863.

602. *Id.*

603. *See also id.* (stating that courts should not “construe the experimental use rule so broadly as to allow a violation of the patent laws in the guise of ‘scientific inquiry,’ when that inquiry has definite, cognizable, and not insubstantial commercial purposes”).

604. 216 F.3d 1343 (Fed. Cir. 2000).

605. *Id.* at 1349 (quoting *Roche*, 733 F.2d at 863). The patent claimed a method for inoculating birds against disease by injecting a vaccine into a specified region of the egg before hatching. *Id.* at 1346. The defendant attempted to inject the vaccine into a different region than was covered in the initial patent. *Id.*

606. *Madey v. Duke Univ.*, 307 F.3d 1351, 1361–62 (Fed. Cir. 2002).

607. 307 F.3d 1351 (Fed. Cir. 2002).

608. *Id.* at 1362–63; *see also* *Pitcairn v. United States*, 547 F.2d 1106, 1125–26 (Ct. Cl. 1976) (rejecting the defense when “[t]ests, demonstrations, and experiments . . . are in keeping with the . . . [defendant’s] business”). For a critique of the Federal Circuit’s distinction between commercial and noncommercial research, see Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 83–87.

609. *Roche Prods., Inc. v. Bolar Pharmaceutical Co.*, 733 F.2d 858, 863 (Fed. Cir. 1984), *superseded on other grounds by* 35 U.S.C. § 271(e).

610. Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1078 (1989).

611. This rationale is consistent with Justice Story’s emphasis on philosophical experiments. *See supra* notes 598–99 and accompanying text.

another invention was patentable.⁶¹² The defense also would promise a return to at least a modicum of the open access that characterized the scientific community until recently.⁶¹³

These uses implicate a distinction that has been drawn between experimentation *on* and experimentation *with* patented inventions.⁶¹⁴ The former type uses the patented invention “to study the underlying technology”⁶¹⁵ or possibly to invent around the patent.⁶¹⁶ The latter, in contrast, uses the patented invention “to study something else”⁶¹⁷ and could more directly threaten the incentive rationale for patents by allowing researchers to avoid paying royalties even when the researchers are “ordinary consumers of patented research tools.”⁶¹⁸ I recommend, at a minimum, applying the exception to activity that experiments *on* the invention, which would have immediate effects given the cramped state of the defense in the Federal Circuit. A doctrine that does not allow experimentation for the purpose of designing around a patent (as the alleged infringer attempted to do in

612. Ned A. Isaacs, *Making, Using, and Selling Without Infringing: An Examination of 35 U.S.C. Section 271(e) and the Experimental Use Exception to Patent Infringement*, 16 AIPLA Q.J. 457, 475 (1989). Expanding the experimental use defense even moderately would reverse course from the Federal Circuit’s cramped version.

613. See Eisenberg, *supra* note 610, at 1046–66 (explaining the benefits of free access to prior discoveries, which include challenging the validity of discoveries, allowing the use of prior discoveries in research, and fostering independence in research); Robert P. Merges, *Property Rights Theory and the Commons: The Case of Scientific Research*, 13 SOC. PHIL. & POL’Y 145, 164–65 (1996) (advocating a “pure research exemption” under the experimental use defense); Arti K. Rai & Rebecca S. Eisenberg, *Bayh-Dole Reform and the Progress of Biomedicine*, 66 LAW & CONTEMP. PROBS. 289, 289 (Winter/Spring 2003) (noting that “longstanding norms call for relatively unfettered access to fundamental knowledge developed by prior researchers” but that this tradition “has eroded considerably . . . as proprietary claims have reached farther upstream from end products to cover fundamental discoveries that provide the knowledge base for future product development”).

614. See *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 878 n.10 (Fed. Cir. 2003) (Newman, J., concurring in part and dissenting in part) (discussing the difference between investigation into and the use of patented things); see also Lauren C. Bruzzone, *The Research Exemption: A Proposal*, 21 AIPLA Q.J. 52, 68–69 (1993) (proposing a formulation to allow for “genuine academic research”); Ronald D. Hantman, *Experimental Use As an Exception to Patent Infringement*, 67 J. PAT. & TRADEMARK OFF. SOC’Y 617, 639 (1985) (contrasting the investigation of a patented computer for the purpose of improving it with the use of the computer for biology research).

615. NAT’L INSTS. OF HEALTH, *supra* note 520, app. D.

616. *Id.*

617. *Id.*

618. *Id.*; see also Eisenberg, *supra* note 610, at 1078 (suggesting that a reasonable royalty be awarded after the fact, in some cases, to maintain incentives for the original inventor).

*Embrex*⁶¹⁹) stands to gain from extension, in particular by encouraging the multigenerational development of patented products.⁶²⁰

4. *New Necessity Proposal: Public Health Emergencies.* *Public health emergencies* present an obvious, but heretofore unrecognized, example of a necessity-based limit. Such an emergency could take the form of a bioterrorism attack⁶²¹ or a widespread epidemic.⁶²² It would threaten catastrophic devastation and innumerable deaths and would often require the immediate resort to pharmaceutical drugs for

619. 216 F.3d 1343, 1349 (Fed. Cir. 2000).

620. The literature provides an even more expansive conception of the defense that encompasses activity by which inventors experiment *with* the patented invention. Research tools in the field of biotechnology provide the typical setting. See NAT'L INSTS. OF HEALTH, *supra* note 520 (defining research tools to include "the full range of resources that scientists use in the laboratory," such as "cell lines, monoclonal antibodies, reagents, animal models, growth factors, combinatorial chemistry libraries, drugs and drug targets, clones and cloning tools . . . , methods, laboratory equipment and machines, databases and computer software"). Professor Janice Mueller, for example, has focused upon the difficulties of licensing in the field and has called for compulsory licensing when there are "significant transaction costs . . . associated with accessing the patented research tools necessary to develop downstream application products such as new drugs, therapies, and diagnostics." Janice M. Mueller, *No "Dilettante Affair": Rethinking the Experimental Use Exception to Patent Infringement for Biomedical Research Tools*, 76 WASH. L. REV. 1, 9 (2001); see also Eisenberg, *supra* note 610, at 1078 (suggesting the award of a reasonable royalty—not an injunction—to patentees whose invention "could potentially lead to improvements in the patented technology or to the development of alternative means of achieving the same purpose"); Strandburg, *supra* note 608, at 138–46 (proposing a two-term system for research tool patents with a period of exclusivity followed by a period of compulsory licensing). See generally Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998) (explaining why upstream patents might deter innovation). Although I do not necessarily advocate such licensing, it is a plausible approach that would strengthen the defense even further and that *could* increase development, depending on the typically unascertainable relative magnitudes of (1) the reduction in incentives for innovation from compulsory licensing and (2) the resultant innovation that would not otherwise (or as quickly) have been achieved absent the reduction in transaction costs from the removal of licensing bottlenecks.

621. Bioterrorism involves "the intentional use of any microorganism, virus, infectious substance, or biological product . . . to cause death, disease, or other biological malfunction in a human . . . or another living organism in order to influence the conduct of government or to intimidate or coerce a civilian population." MODEL STATE EMERGENCY HEALTH POWERS ACT § 1-104(a) (2001), available at <http://www.publichealthlaw.net/MSEHPA/MSEHPA2.pdf>.

622. The AIDS epidemic ravaging parts of the world would qualify as such an emergency if it were to occur on a similar scale in the United States. See UNAIDS, REPORT ON THE GLOBAL HIV/AIDS EPIDEMIC 30 (2004), available at <http://www.unaids.org/bangkok2004/report.html> (outlining statistics that show how AIDS kills more than six thousand people per day in sub-Saharan Africa).

treatment.⁶²³ But the patentee who controls the patented product that is necessary for treatment can refuse to license the drug or license it at exorbitant rates. The patentee also might not be able to manufacture sufficient quantities to treat the affected population.⁶²⁴

One recent example offering at least the potential of a public health emergency unfolded in the fall of 2001 as anthrax spores were found on letters mailed to members of Congress and media outlets.⁶²⁵ The only FDA-approved treatment for the potentially fatal inhalation anthrax was the antibiotic ciprofloxacin (marketed as “Cipro” and patented by Bayer, a German pharmaceutical company).⁶²⁶ The enormous increase in demand for Cipro and concern about Bayer’s pricing led Canada to override the patent by licensing generic production of the drug and the United States to threaten to do the same.⁶²⁷ In response to the latter threat, Bayer agreed to increase its production and to lower the price of the drug.⁶²⁸ The anthrax scare is hardly unique.⁶²⁹

623. See James G. Hodge, Jr., *Bioterrorism Law and Policy: Critical Choices in Public Health*, 30 J.L. MED. & ETHICS 254, 256 (2002) (discussing the government’s need to combat certain bioterrorism attacks such as anthrax or smallpox with pharmaceutical drugs).

624. Some general support for a public health emergency exception is provided by the cases discussed above in the Section on compulsory licensing, see *supra* notes 521–23 and accompanying text, such as that in which the court refused to issue a permanent injunction against Milwaukee that would have required the city to dump raw sewage into Lake Michigan. See *City of Milwaukee v. Activated Sludge, Inc.*, 69 F.2d 577, 593 (7th Cir. 1934).

625. Hodge, *supra* note 623, at 254; Stephen Engleberg & Judith Miller, *Sign of Escalating Threat*, N.Y. TIMES, Oct. 17, 2001, at A1.

626. Kathleen Pender, *Cipro Had Big Boost from U.S.: U.S. Tests Led to OK for Anthrax Use*, S.F. CHRON., Oct. 25, 2001, at D1.

627. Amy Harmon & Robert Pear, *Canada Overrides Patent for Cipro to Treat Anthrax*, N.Y. TIMES, Oct. 19, 2001, at A1; see Harris, *supra* note 5 (describing how Secretary of Health and Human Services Tommy Thompson threatened to “defy Bayer’s patent unless the company lowered its price”).

628. Cahoy, *supra* note 514, at 126–27; Keith Bradsher, *Bayer Agrees to Charge Government a Lower Price for Anthrax Medicine*, N.Y. TIMES, Oct. 25, 2001, at B8. See generally Donald G. McNeil, *A Rush for Cipro, and the Global Ripples*, N.Y. TIMES, Oct. 17, 2001, at A1 (discussing compensation rules for governmental taking of patent rights).

629. See Hodge, *supra* note 623, at 256 (discussing threats of smallpox, tularemia (a.k.a. rabbit fever), plague, and viral hemorrhagic fever); *id.* at 255 (noting the contamination of restaurant salad bars by the intentional introduction of salmonella in Oregon in 1984); J.B. Tucker, *Historical Trends Related to Bioterrorism: An Empirical Analysis*, 5 EMERGING INFECTIOUS DISEASES 498, 498 (1999) (discussing the release of sarin nerve gas in the Tokyo subway in March 1995).

How will Congress know if a crisis presents a “public health emergency”⁶³⁰ that creates a limit on patents?⁶³¹ One can imagine the felt necessities of the present lacking perspective and playing a disproportionate role in treating every crisis as a public health emergency. The exception therefore must include an unequivocal threshold, perhaps one similar to that in the Model State Emergency Health Powers Act.⁶³² This Act was created as a model for state and local public health authorities in responding to such emergencies.⁶³³ Its definition of “public health emergency” is as appropriate as any:

[A]n occurrence or imminent threat of an illness or health condition that: (1) is believed to be caused by any of the following: (i) bioterrorism; (ii) the appearance of a novel or previously controlled or eradicated infectious agent or biological toxin; (iii) [*a natural disaster*]; (iv) [*a chemical attack or accidental release*]; or (v) [*a nuclear attack or accident*]; and (2) poses a high probability of any of the following harms: (i) a large number of deaths in the affected population; (ii) a large number of serious or long-term disabilities in the affected population; or (iii) widespread exposure to an infectious or toxic agent that poses a significant risk of substantial future harm to a large number of people in the affected population.⁶³⁴

630. There are several competing conceptions of “public health”: (1) the societal factors that affect health; (2) the health of populations; and (3) government intervention, which “involves public officials taking appropriate measures . . . to protect the health of the public.” Mark A. Rothstein, *Rethinking the Meaning of Public Health*, 30 J.L. MED. & ETHICS 144, 144–46 (2002); see also COMMITTEE FOR THE STUDY OF THE FUTURE OF PUBLIC HEALTH, DIVISION OF HEALTH CARE SERVICES, NATIONAL INSTITUTES OF MEDICINE, *THE FUTURE OF PUBLIC HEALTH 1* (1988) (defining public health as “what we, as a society, do collectively to assure the conditions in which people can be healthy”).

631. Although the courts can play an important role in constructing many of the limits to IP rights discussed in this Article, the public health emergency exception would seem particularly appropriate for legislative action, especially in the adoption of a definition that would apply across multiple factual contexts.

632. MODEL STATE EMERGENCY HEALTH POWERS ACT (2001).

633. Public health lawyers and scholars at the Center for Law and the Public’s Health at Georgetown and Johns Hopkins Universities drafted the Act at the request of the Centers for Disease Control and Prevention and partners including the National Governors Association, the National Conference of State Legislatures, the Association of State and Territorial Health Officials, the National Association of City and County Health Officials, and the National Association of Attorneys General. See *id.*; Hodge, *supra* note 623, at 254–55.

634. MODEL STATE EMERGENCY HEALTH POWERS ACT, § 1-104(m).

An additional example of an exception based on public health emergencies appears in the TRIPS Agreement, *supra* note 42. TRIPS allows member nations to utilize compulsory licensing as long as the user makes efforts “to obtain authorization . . . on reasonable commercial terms and conditions” from the patentee but “such efforts [are] not . . . successful within a reasonable period of time.” *Id.* art. 31(b). This requirement is waived, however, “in the case of a national

Crises that meet these requirements most likely would constitute public health emergencies that would trigger the necessity-based limit to patents. In requiring compulsory licensing, the necessity-based limit contemplated here naturally implicates the question of the resultant effects on the incentives for innovation.⁶³⁵ Reduced incentives would be particularly worrisome in the pharmaceutical industry, with its uniquely high costs of creating products.⁶³⁶ And so I offer the exception with caution. Mollifying the concern, there is some evidence that the adverse effect of compulsory licensing is less than commonly believed. Several empirical studies have shown that, in many instances, compulsory licensing has not reduced innovation.⁶³⁷ And any licensing required from the irregular and unforeseeable incidence of public health emergencies arguably is unpredictable enough to minimize the effects on ex ante incentives.⁶³⁸ In any event,

emergency or other circumstances of extreme urgency.” *Id.* (emphasis added). The agreement also allows member nations to exclude from patentability inventions needed to protect “human . . . life or health.” *Id.* art. 27(2).

The public health exception was strengthened even further in the 2001 World Trade Organization (WTO) Ministerial Declaration on the TRIPS Agreement and Public Health (Doha Declaration). WTO, Ministerial Declaration, Nov. 14, 2001, 4th Session, Ministerial Conference, Declaration on the TRIPS Agreement and Public Health, WT/MIN(01)/DEC/2, (Nov. 20, 2001) [hereinafter Doha Declaration], available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.pdf. The Doha Declaration provides that “the TRIPS Agreement does not and should not prevent members from taking measures to protect public health” and that “[e]ach member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted.” *Id.* ¶¶ 4, 5(b); see Susan Sell, *Trade Issues and HIV/AIDS*, 17 EMORY INT’L L. REV. 933, 935–36 (2003) (discussing the scope of the Doha Declaration). It allows member nations to define “what constitutes a national emergency or other circumstances of extreme urgency,” and declares that “public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent a national emergency or other circumstances of extreme urgency.” Doha Declaration, *supra*, ¶ 5(c). In these cases, the obligation to negotiate with the patentholder is waived.

635. The compulsory licensing envisioned would involve the payment of royalties to the patentee. Even though the difficulties of determining a reasonable royalty are not insubstantial, the alternative solution of royalty-free licensing is even worse in threatening incentives to innovate.

636. See *supra* note 154 and accompanying text.

637. Professor F.M. Scherer studied compulsory licensing in antitrust consent decrees in the 1950s and 1960s and found that it did not correlate with reduced levels of R&D spending. SCHERER ET AL., *supra* note 153, at 66–67. A recent study found similar results in the 1990s. See Chien, *supra* note 514, at 885–92 (finding no decline in patenting in five out of six cases studied).

638. Colleen Chien has focused on the factors of market significance (the extent to which a licensee threatens a patent’s markets) and predictability (the extent to which a licensor anticipates that a compulsory license will be taken on a patent) in determining the effect of compulsory licensing on innovation. Chien, *supra* note 514, at 857, 873. Innovation has not been shown to suffer when one of the factors is absent, such as when (1) compulsory licenses are imposed as part of antitrust consent decrees and cover existing inventions as opposed to future

effects on innovation incentives from the public health emergency exception must be monitored and calibrated *ex post*.⁶³⁹

* * *

In conclusion, (1) several limits based on necessity and equity already exist in patent law, (2) the recovery of the defenses of experimental use and the reverse doctrine of equivalents would promote development in the form of increased innovation, and (3) the creation of a necessity-based limit for public health emergencies would offer a potent tool that could be utilized in the face of a national calamity.

C. Trademark Law

Eight limits based on development, necessity, and equity currently appear, or should be recovered, in trademark law. The necessity limit surfaces in the defenses of genericide, nominative use, fair use, parody, and functionality. Equitable themes can be discerned in the defense of laches and the focus on bad faith at the heart of the Anticybersquatting Consumer Protection Act. Finally, application of the development limit would cabin dilution to marks that are nationally famous.

1. *Existing Necessity Limits: Genericide, Nominative Use, Fair Use, Parody, Functionality.* In contrast to marks that signify the particular source of the product, generic marks refer to an entire class

licensing, or (2) the market subject to such licensing is insignificant, as was the Canadian market in relation to the worldwide market for pharmaceuticals. *Id.* at 875–79; see F.M. SCHERER, *THE ECONOMIC EFFECTS OF COMPULSORY PATENT LICENSING* 48–50 (1977) (discussing mandatory licensing orders as a type of antitrust remedy); Donald G. McFetridge, *Intellectual Property, Technology Diffusion, and Growth in the Canadian Economy*, in *COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY* 65, 87–92 (Robert D. Anderson & Nancy T. Gallini eds., 1998) (examining Canadian pharmaceutical licensing in the context of technological diffusion and economic growth). In contrast, innovation might be reduced when both predictability and market effect are present, such as when (1) the U.S. government takes title to a patented invention that a contractor created for it, and (2) compulsory licensing of all patents in the pharmaceutical industry is contemplated. See SCHERER, *supra*, at 78–84 (discussing a study of government contractors on the use of patented inventions that were created for government use); C.T. TAYLOR & Z.A. SILBERSTON, *THE ECONOMIC IMPACT OF THE PATENT SYSTEM* 198–99 (1973) (surveying opinions on compulsory licensing in the pharmaceutical industry and finding that firms believed that they would not receive adequate compensation under a compulsory licensing scheme); Chien, *supra* note 514, at 877–79.

639. For an example of such monitoring, see Chien, *supra* note 514, at 897–907, examining the effects of six compulsory licenses issued by the Department of Justice in the 1990s. Calibration could take the form of increasing the royalty paid to the patentee.

of products.⁶⁴⁰ Through a process known as “*genericide*,” marks that initially are distinctive lose protection if they are utilized so frequently that they no longer indicate the source of the goods.⁶⁴¹ The primary rationale for the defense is necessity, as the generic term becomes the only way to express a concept simply.⁶⁴² Comparing marks that courts have deemed generic with alternative descriptions reveals the necessity of employing the generic term:

- “Thermos” versus “vacuum bottle”;⁶⁴³
- “Aspirin” versus “salicylic acid”;⁶⁴⁴
- “Escalator” versus “a power-driven set of stairs arranged like an endless belt that ascend or descend continuously”;⁶⁴⁵
- “Cellophane” versus “regenerated cellulose in thin transparent sheets used especially for packaging”;⁶⁴⁶ and
- “Yo-yo” versus “a thick grooved double disk with a string attached to its center which is made to fall and rise to the hand by unwinding and rewinding on the string.”⁶⁴⁷

Absent the ability to utilize the generic term, competitors would be forced to resort to alternatives that are not as clear or easy to remember.⁶⁴⁸ In “*allay*[ing] fears that producers will deplete the stock of useful words by asserting exclusive rights in them,”⁶⁴⁹ the genericide defense serves as a type of necessity-based defense to trademark law.

640. MERGES ET AL., *supra* note 13, at 675.

641. *Id.* The determination of whether the mark has become generic is based on “[t]he primary significance of the registered mark to the relevant public.” 15 U.S.C. § 1064 (2000). Also, generic terms that are generic *ab initio* cannot be registered. *Id.*

642. See *Duraco Prods., Inc. v. Joy Plastic Enterprises*, 40 F.3d 1431, 1442 (3d Cir. 1994) (explaining that the protection of generic terms would “allow someone to monopolize the word [and] . . . debilitate competitors”).

643. *King-Seeley Thermos Co. v. Aladdin Indus., Inc.*, 321 F.2d 577, 578–79 (2d Cir. 1963).

644. *New Kids on the Block v. News Am. Publ’g, Inc.*, 971 F.2d 302, 306 n.4 (9th Cir. 1992).

645. *Haughton Elevator Co. v. Seeberger*, 85 U.S.P.Q. (BNA) 80 (Com. Pat. 1950); MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 386 (10th ed. 1996).

646. *DuPont Cellophane Co. v. Waxed Prods. Co.*, 85 F.2d 75, 77 (2d Cir. 1936); MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY, *supra* note 645, at 177.

647. *Donald F. Duncan, Inc. v. Royal Tops Mfg. Co.*, 343 F.2d 655, 667–68 (7th Cir. 1965); MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY, *supra* note 645, at 1351.

648. MERGES ET AL., *supra* note 13, at 685 (stating that alternative phrases are “more expensive to advertise (because [they are] longer), harder to remember, and more subject to mistakes and confusion”); ROBERT P. MERGES, WHO OWNS THE CHARLES RIVER BRIDGE? INTELLECTUAL PROPERTY AND COMPETITION IN THE SOFTWARE INDUSTRY 40 (Univ. of Cal. Berkeley Sch. of Law, Pub. Law & Legal Theory, Working Paper No. 15, 1999) (noting that a generic term becomes a “standard linguistic descriptor”).

649. *New Kids on the Block*, 971 F.2d at 306.

The nominative use and fair use defenses resemble genericide in that competitors need to use the mark to communicate but differ in that trademark owners can enforce their marks in other contexts.⁶⁵⁰ The nominative use defense allows a defendant to use a mark to describe the plaintiff's product, and fair use applies when a defendant uses the plaintiff's mark to describe the defendant's own product.⁶⁵¹

Nominative use allows a party to use a protected mark when the mark is "the only word reasonably available to describe a particular thing."⁶⁵² In some circumstances, even when a defendant's ultimate purpose is to describe its own product, the defendant nonetheless needs to use the plaintiff's mark to describe the plaintiff's product.⁶⁵³ For example, the Ninth Circuit has applied the defense to a newspaper's reference to a musical group in running a contest that asked "Which one of the New Kids is the most popular?"⁶⁵⁴ and to the Franklin Mint's production of collectibles utilizing Princess Diana's name and likeness.⁶⁵⁵

Fair use allows competitors to use marks in their descriptive (rather than trademark) sense,⁶⁵⁶ such as "to describe the goods or services of [a] party, or their geographic origin."⁶⁵⁷ The defense has allowed competitors to use descriptive marks (that have acquired

650. A related defense appears in the Federal Trademark Dilution Act (FTDA) and protects comparative advertising. See 15 U.S.C. § 1125(c)(4)(A) (2000) (exempting from dilution claims the "[f]air use of a famous mark by another person in comparative commercial advertising or promotion to identify the competing goods or services of the owner of the famous mark"). Other defenses recognized by the FTDA are the "[n]oncommercial use of a mark," *id.* § 1125(c)(4)(B), "[a]ll forms of news reporting and news commentary," *id.* § 1125(c)(4)(C), and the use of a name of a historic structure, 16 U.S.C. § 470a(a)(1)(A) (2000).

651. *New Kids on the Block*, 971 F.2d at 307; see also *Cairns v. Franklin Mint Co.*, 292 F.3d 1139, 1150–52 (9th Cir. 2002) (holding that the Franklin Mint was entitled to the fair use defense in using "Diana, Princess of Wales" to describe its product).

652. *New Kids on the Block*, 971 F.2d at 308. In determining whether the defense applies, courts examine whether (1) the product is not readily identifiable without use of the trademark, (2) the portion of the mark used is reasonably necessary to identify the product, and (3) the user does nothing to suggest sponsorship or endorsement by the trademark holder. *Id.*

653. *Cairns*, 292 F.3d at 1151.

654. *New Kids on the Block*, 971 F.2d at 304. Another defendant was the newspaper *The Star*, which asked: "Now which kid is the sexiest?" *Id.*

655. *Cairns*, 292 F.3d at 1152–53.

656. *Zatarain's, Inc. v. Oak Grove Smokehouse, Inc.*, 698 F.2d 786, 791 (5th Cir. 1983); see also *Cosmetically Sealed Indus., Inc. v. Chesebrough-Pond's USA Co.*, 125 F.3d 28, 30 (2d Cir. 1997) (determining that the phrase "Seal it with a Kiss" is descriptive and thus not protectable); *Soweco, Inc. v. Shell Oil Co.*, 617 F.2d 1178, 1185 (5th Cir. 1980) (noting that the fair use defense is one of several permissible defenses to an "incontestable" mark).

657. 15 U.S.C. § 1115(b)(4) (2000).

secondary meaning)⁶⁵⁸ such as the term “fish fry” to describe a coating mix used to fry fish,⁶⁵⁹ the phrase “Seal it with a Kiss” to encourage customers to try lipstick and seal a complimentary postcard by kissing it,⁶⁶⁰ and the image of a pine tree shape that referenced the pine scent of defendant’s product and the Christmas season.⁶⁶¹ By preventing trademark owners from appropriating descriptive terms for their exclusive use, the defense allows competitors to describe their goods.⁶⁶²

As the Ninth Circuit has stated, “[I]t is often virtually impossible to refer to a particular product for purposes of comparison, criticism, point of reference or any other . . . purpose without using [a] mark.”⁶⁶³ In allowing parties to use marks that are necessary to describe their goods or others’ products, the fair use and nominative use defenses demonstrate necessity-based limits to trademark.

Parody offers another example of a necessity-based limit to trademark.⁶⁶⁴ Trademarks are at the heart of advertising and commerce and constitute some of the most powerful symbols in American society today.⁶⁶⁵ Commentary on popular culture and society thus often requires reference to trademarks.⁶⁶⁶ Parody, in particular, must evoke a mark for an audience to appreciate the criticism. But trademark owners typically are not eager to allow critical and humorous commentary on their marks, and their refusal to allow such uses could endanger free expression protected by the

658. A descriptive mark generally is not protected without a showing of secondary meaning. Courts classify trademarks in one of four categories: (1) *generic*, which describes a class of goods; (2) *descriptive*, which identifies a characteristic of a good; (3) *suggestive*, which suggests a characteristic of a good and requires a consumer to exercise imagination to determine the nature of the good; and (4) *arbitrary* or *fanciful*, bearing no relationship to the good. *E.g.*, *Zatarain’s*, 698 F.2d at 790–91; *Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 9–11 (2d Cir. 1976).

659. *Zatarain’s*, 698 F.2d at 796.

660. *Cosmetically Sealed Indus.*, 125 F.3d at 30.

661. *Car-Freshner Corp. v. S.C. Johnson & Son, Inc.*, 70 F.3d 267, 270 (2d Cir. 1995).

662. *New Kids on the Block v. News Am. Publ’g, Inc.*, 971 F.2d 302, 306 (9th Cir. 1992).

663. *Id.*

664. Parody is also an example of a limit based on development.

665. *L.L. Bean, Inc. v. Drake Publishers, Inc.*, 811 F.2d 26, 28 (1st Cir. 1987); Robert J. Shaughnessy, Note, *Trademark Parody: A Fair Use and First Amendment Analysis*, 72 VA. L. REV. 1079, 1079 (1986).

666. See *L.L. Bean*, 811 F.2d at 30 (noting, with respect to famous trademarks, that “trademarks offer a particularly powerful means of conjuring up the image of their owners, and thus become an important, perhaps at times indispensable, part of the public vocabulary”).

First Amendment.⁶⁶⁷ Courts thus have recognized a parody defense in protecting, for example, (1) a version of Cliffs Notes published by the creators of Spy Magazine,⁶⁶⁸ (2) a takeoff on Jordache jeans (and its signature horse's head) by "Lardashe" jeans (with a smiling pig),⁶⁶⁹ (3) an erotic "Back-To-School-Sex-Catalog" imitating the L.L. Bean catalog,⁶⁷⁰ and (4) a sports mascot's use (and abuse) of the children's character "Barney" in a skit at baseball games.⁶⁷¹ The parody defense confirms the need for such a limit on trademarks in order to prevent the stifling of expression.

Necessity limits carve out space for not only expression but also competition. The doctrine of *functionality* ensures that trademark holders receive protection only for characteristics of a product that designate its source rather than those that are essential to competition in the marketplace.⁶⁷² The Supreme Court has defined functional features as those for which "the exclusive use . . . would put competitors at a significant non-reputation-related disadvantage"⁶⁷³ and those that are "essential to the use or purpose of the device" or

667. See *id.* at 33 (stating that if a trademark owner could "enjoin the use of his mark in a noncommercial context found to be negative or offensive, then a corporation could shield itself from criticism by forbidding the use of its name in commentaries critical of its conduct"); *Yankee Publ'g Inc. v. News Am. Publ'g Inc.*, 809 F. Supp. 267, 276 (S.D.N.Y. 1992) (suggesting a narrow interpretation of the Lanham Act when "the unauthorized use of a trademark is for expressive purposes of comedy, parody, allusion, criticism, news reporting, and commentary"); Robert Denicola, *Trademarks As Speech: Constitutional Implications of the Emerging Rationales for the Protection of Trade Symbols*, 1982 WIS. L. REV. 158, 196 ("Rules restricting the use of well-known trademarks may . . . restrict the communication of ideas.").

668. *Cliffs Notes, Inc. v. Bantam Doubleday Dell Publ'g Group, Inc.*, 886 F.2d 490, 491-97 (2d Cir. 1989).

669. *Jordache Enterprises, Inc. v. Hogg Wyld, Ltd.*, 828 F.2d 1482, 1483, 1486 (10th Cir. 1987).

670. *L.L. Bean*, 811 F.2d at 27-34.

671. *Lyons P'ship v. Giannoulas*, 179 F.3d 384, 385-88 (5th Cir. 1999).

672. The text discusses the doctrine of *utilitarian functionality*. Some courts have invoked a doctrine of *aesthetic functionality* to protect ornamentation or appearance characteristics such as china patterns, tote-bag features, and lamp designs. See *Villeroy & Boch Keramische Werke K.G. v. THC Sys., Inc.*, 999 F.2d 619, 620 (2d Cir. 1993) (china patterns); *LeSportsac, Inc. v. K Mart Corp.*, 754 F.2d 71, 74 (2d Cir. 1985) (tote bags); *Keene Corp. v. Paraflex Indus., Inc.*, 653 F.2d 822, 823 (3d Cir. 1981) (lamp designs). See generally Mitchell M. Wong, Note, *The Aesthetic Functionality Doctrine and the Law of Trade-Dress Protection*, 83 CORNELL L. REV. 1116, 1118 (1998) (describing the doctrine). Because the use of these characteristics is less "functional" or necessary for competitors to compete, the aesthetic functionality theory does not directly invoke the concerns underlying the utilitarian functionality theory.

673. *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 165 (1995).

“affect[] the cost or quality of the device.”⁶⁷⁴ Typically arising in the area of “trade dress”—because the design or packaging of a product is more likely to be functional than its name—functionality provides a limit that encourages competition.⁶⁷⁵ For example, the Supreme Court in *TraFFix Devices, Inc. v. Marketing Displays, Inc.*⁶⁷⁶ applied the doctrine to prevent trade dress protection for a dual-spring design that kept temporary road signs upright, in the process declaring that expired utility patents provide “strong evidence” of functionality.⁶⁷⁷ Courts also have applied the functionality defense to synthetic animal heads,⁶⁷⁸ the round shape of air cleaners,⁶⁷⁹ an infants’ activity gym,⁶⁸⁰ a plastic wall mounting assembly,⁶⁸¹ and the colors of pharmaceutical capsules.⁶⁸²

2. *Existing Equity Limits: Laches, Bad Faith Cybersquatting.* *Laches* is an equitable defense to a trademark lawsuit. A defendant invoking the defense must show an unreasonable delay in the trademark holder’s filing of suit and prejudice.⁶⁸³ In determining unreasonable delay, courts consider the length of and justifications

674. *TraFFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 33 (2001). For a parsing of the “identification” and “competition” theories underlying these functionality definitions, see Wong, *supra* note 672, at 1120. The Restatement of Unfair Competition offers another definition, which provides that a design is functional if it “affords benefits in the manufacturing, marketing, or use of the goods or services with which the design is used, apart from any benefits attributable to the design’s significance as an indication of source, that are important to effective competition . . . and . . . not practically available through the use of alternative designs.” RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 17 (1995).

675. The doctrine also serves a channeling function in directing parties to protect functional features of their products under patent law. See *Qualitex*, 514 U.S. at 164–65 (“It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time . . .”).

676. 532 U.S. 23 (2001).

677. *Id.* at 29; see also *id.* at 30 (“Where the expired patent claimed the features in question, one who seeks to establish trade dress protection must carry the heavy burden of showing that the feature is not functional, for instance by showing that it is merely an ornamental, incidental, or arbitrary aspect of the device.”).

678. *Rachel v. Banana Republic, Inc.*, 831 F.2d 1503, 1506–07 (9th Cir. 1987).

679. *Duracraft Corp. v. Honeywell, Inc.*, 881 F. Supp. 685, 687 (D. Mass. 1994).

680. *Tyco Indus., Inc. v. Tiny Love, Ltd.*, 914 F. Supp. 1068, 1082 (D.N.J. 1996).

681. *Mid-Am. Bldg. Prods. Corp. v. Richwood Bldg. Prods., Inc.*, 970 F. Supp. 612, 616 (E.D. Mich. 1997).

682. *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 857 n.20 (1982).

683. *E.g.*, *Jarrow Formulas, Inc. v. Nutrition Now, Inc.*, 304 F.3d 829, 838 (9th Cir. 2002); *Brunswick Corp. v. Spinnet Reel Co.*, 832 F.2d 513, 523 (10th Cir. 1987).

for the delay.⁶⁸⁴ Prejudice typically is found when a defendant incurs substantial costs because of the delay in bringing suit. Cases in which courts have found laches include (1) a plaintiff's seven-year delay in suing a seller of nutritional supplements that had spent hundreds of thousands of dollars per year in a marketing campaign;⁶⁸⁵ (2) a plaintiff's twelve-year delay in suing an agricultural products manufacturer that had expended nearly a half million dollars to promote its mark;⁶⁸⁶ and (3) a plaintiff's six-year delay in suing a defendant that had used the same marketing channels as the plaintiff, which led the defendant to incur more than \$150,000 in advertising expenditures.⁶⁸⁷

An equitable foundation underlies the *Anticybersquatting Consumer Protection Act* (ACPA).⁶⁸⁸ The Act targets "cybersquatting," which is "the practice of registering 'well-known brand names as Internet domain names' in order to force the rightful owners of the marks 'to pay for the right to engage in electronic commerce under their own brand name.'"⁶⁸⁹ The Act provides that a cybersquatter may be liable to the owner of a protected mark if the cybersquatter has "a bad faith intent to profit" from a mark and "registers, traffics in, or uses" an identical, confusingly similar, or (for famous marks) dilutive mark.⁶⁹⁰

The focus on a party's "bad faith" implicates equity. So too do several of the component factors relevant to the determination of bad faith, such as an "intent to divert consumers . . . to a site . . . that could harm the goodwill represented by the mark,"⁶⁹¹ an offer to "assign the domain name to the mark owner or any third party for financial gain without having used . . . the domain name in the bona fide offering of any goods or services,"⁶⁹² and the "provision of material and misleading false contact information" when registering the domain

684. The length of the analogous limitations period is also relevant. *Jarrow Formulas*, 304 F.3d at 838.

685. *Id.* at 838–40.

686. *Stanfield v. Osborne Indus., Inc.*, 839 F. Supp. 1499, 1503, 1507 (D. Kan. 1993).

687. *E-Sys., Inc. v. Monitek, Inc.*, 720 F.2d 604, 606, 607 (9th Cir. 1983).

688. 15 U.S.C. § 1125(d) (2000).

689. *Virtual Works, Inc. v. Volkswagen of Am., Inc.*, 238 F.3d 264, 267 (4th Cir. 2001) (quoting S. REP. NO. 106-140, at 5 (1999)).

690. 15 U.S.C. § 1125(d)(1)(A).

691. *Id.* § 1125(d)(1)(B)(i)(V).

692. *Id.* § 1125(d)(1)(B)(i)(VI).

name.⁶⁹³ For example, a court found bad faith when a company, Virtual Works, registered the domain name vw.net knowing that consumers might believe that Volkswagen owned the domain name, threatened to sell the domain name to the highest bidder unless Volkswagen made an offer to purchase it within twenty-four hours, and never did business as VW.⁶⁹⁴ Scrutiny of bad faith accords with an equitable limit on trademark.

3. *Recovered Development Proposal: Dilution Limit.* As I discussed earlier, the development at the core of trademark law is more nuanced than the incentive to create new works underlying patent and copyright law.⁶⁹⁵ In trademark law, development takes the form of promoting a market infused with optimal source identification. In other words, trademark law endeavors to create a market in which customers are fully aware of the relationship between a product and its source, which serves the beneficial goal of reducing search costs.⁶⁹⁶

The traditional justification for trademark law, preventing customer confusion, aligns precisely with this objective.⁶⁹⁷ Customers who are confused about the link between product and source, and who, as a consequence, purchase unintended products or cannot rely on the information that they receive in the marketplace obviously

693. *Id.* § 1125(d)(1)(B)(i)(VII).

694. *Virtual Works*, 238 F.3d at 269–70.

695. *See supra* notes 169–71 and accompanying text.

696. *See Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163–64 (1995) (explaining that trademark law “‘reduce[s] the customer’s costs of shopping and making purchasing decisions,’ for it quickly and easily assures a potential customer that *this* item—the item with this mark—is made by the same producer as other similarly marked items that he or she liked (or disliked) in the past” (alteration in original) (quoting 1 MCCARTHY, *supra* note 50, at § 2.01[2])); Landes & Posner, *supra* note 51, at 275 (calling the reduction of consumer search costs the “essential economic function of trademarks”); Lemley, *Lanham Act*, *supra* note 17, at 1695 (“We give protection to trademarks for one basic reason: to enable the public to identify easily a particular product from a particular source.”). Lowering search costs serves a related, secondary rationale of trademark law: encouraging “the production of quality products.” *Qualitex*, 514 U.S. at 164. Reducing customer confusion ensures that manufacturers receive the appropriate credit (or blame) for their products, thereby reducing their ability to evade responsibility for products. *See Park ‘N Fly, Inc. v. Dollar Park & Fly, Inc.*, 469 U.S. 189, 198 (1985) (noting that trademarks promote quality goods “by securing to the producer the benefits of good reputation”).

697. *See, e.g., Qualitex*, 514 U.S. at 162 (calling “the more important part of the statutory definition of a trademark” the identification, distinguishing, and indication of the source of goods); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 157 (1989) (explaining that the law of unfair competition is concerned with “protecting consumers from confusion as to source” (emphasis omitted)).

suffer a severing of that link. As a result, customers must gather more knowledge before buying products and must incur higher search costs.⁶⁹⁸ For example, they might need to pore over ingredient labels or chemical compositions to confirm that they are purchasing the correct product.⁶⁹⁹ This result is particularly troublesome for “experience goods” (which provide information about their qualities over time—for example, automobiles) and “reliance goods” (which never provide information to the consumer—for example, computer hardware).⁷⁰⁰

The *dilution* cause of action, in contrast, typically is not necessary to achieve a market infused with optimal source identification.⁷⁰¹ The Federal Trademark Dilution Act of 1995 (FTDA)⁷⁰² provides a cause of action to “[t]he owner of a famous mark” who suffers “dilution of the distinctive quality of the mark.”⁷⁰³ Although the dilution claim is helpful in some cases in preserving the product-source link, in many others it is not. Trademark’s development rationale would be served by limiting dilution to the category of marks that *could* suffer

698. Kenneth L. Port, *The Congressional Expansion of American Trademark Law: A Civil Law System in the Making*, 35 WAKE FOREST L. REV. 827, 888–89 (2000).

699. *See id.* at 889 (defending trademark protection, using the chemical composition of laundry detergent as an example).

700. *See* Dan L. Burk, *Trademark Doctrines for Global Electronic Commerce*, 49 S.C. L. REV. 695, 701 (1998) (noting that trademarks are less necessary for “inspection goods,” which consumers can assess by observation (as with fresh fruit)); *see also* Nicholas Economides, *Trademarks*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 601, 602 (Peter Newman ed., 1998) (explaining that many markets are characterized by informational asymmetry, by which “sellers have much more and better information about the unobservable features of a good for sale than buyers” and that trademarks “identify the unobservable features” of products); I.P.L. Ping & David Reitman, *Why Are Some Products Branded and Others Not?*, 38 J.L. & ECON. 207, 209 (1995) (“[S]ellers are more likely to brand when consumers find personal search and experimentation relatively unattractive.”).

701. The dilution cause of action was first introduced in an influential article, Frank Schechter, *The Rational Basis of Trademark Protection*, 40 HARV. L. REV. 813 (1927). Prior to the enactment of the federal antidilution law in 1996, dilution was a creature of state statutes. 4 MCCARTHY, *supra* note 61, § 24:67, at 24-128.

702. 15 U.S.C. § 1125(c) (2000).

703. *Id.* § 1125(c)(1). Dilution is defined as “the lessening of the capacity of a famous mark to identify and distinguish goods or services.” *Id.* § 1127. The statute sets forth eight factors for courts to consider in determining whether a mark is famous: (1) the distinctiveness of the mark, (2) the duration and extent of the use of the mark, (3) the duration and extent of advertising and publicity of the mark, (4) the geographical extent of the trading area in which the mark is used, (5) the channels of trade with which the mark is used, (6) the degree of recognition of the mark in the trading areas used, (7) the nature and extent of use of the same or similar marks, and (8) whether the mark is registered on the principal register. *Id.* § 1125(c)(1)(A)–(H).

severance of the product-source link and that generally would lack a cause of action for infringement.⁷⁰⁴

The dilution cause of action most obviously promotes source identification in its application to famous marks that are known to the general public and that would be weakened by multiple uses in unrelated markets.⁷⁰⁵ The threat to source identification comes from “the gradual whittling away or dispersion of the identity and hold upon the public mind of the mark.”⁷⁰⁶ This gradual lessening of a mark’s distinctive character eventually prevents customers from recognizing the source to which it is linked. And as the nexus between product and source dissipates, consumers cannot rely on marks alone to determine the source of products.⁷⁰⁷

The dilution cause of action, however, is much less likely to promote development when applied to marks of which the general public is unaware. Courts nonetheless have found dilution to apply to marks that are not nationally famous, such as Intermatic electrical products,⁷⁰⁸ Lexington advice services,⁷⁰⁹ Naitiques fingernail care

704. The legislative history of the FTDA supports such a limit. The gradual diminution of the source-designation quality of nationally famous marks—such as DuPont, Buick, and Kodak—concerned Congress. See H.R. REP. NO. 104-374, at 3 (1995), *reprinted in* 1996 U.S.C.C.A.N. 1029, 1030 (providing as examples of actionable dilution DuPont for shoes, Buick for aspirin, and Kodak for pianos). A predecessor bill similarly indicated selective application. See S. REP. NO. 100-515, at 41–42 (1988), *reprinted in* 1988 U.S.C.C.A.N. 5577, 5604–05 (noting that the act “is to be applied selectively and is intended to provide protection only to those marks which are both truly distinctive and famous,” and that “the new dilution provision should apply only to those very unique marks which qualify for dilution protection”). Furthermore, the Trademark Review Commission referred to dilution as an “extraordinary” remedy. Trademark Review Comm’n, U.S. Trademark Ass’n, *Report and Recommendations to USTA President and Board of Directors*, 77 TRADEMARK REP. 375, 461 (1987). See generally 4 MCCARTHY, *supra* note 61, § 24:92, at 24-175 (“Congress intended that the courts should be discriminating and selective in categorizing a mark as ‘famous’ so as to qualify for protection against dilution.”).

705. Dilution does not typically implicate the dangers of confusion. In most cases, consumers recognize that the products are not related and will, on first glance, still know which manufacturer creates which product.

706. Schechter, *supra* note 701, at 825.

707. See Brief of Amicus Curiae Intellectual Property Law Professors at 4, *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418 (2003) (“If a company could sell bicycles under the Kodak name, surely another could sell pizza, another gloves, and still another desks. No longer could one refer to ‘Kodak’ without more Indeed, over time the name might become so common that its importance as an identifier would diminish.”).

708. *Intermatic, Inc. v. Toeppen*, 947 F. Supp. 1227, 1239 (N.D. Ill. 1996).

709. *Lexington Mgmt. Corp. v. Lexington Capital Partners*, 10 F. Supp. 2d 271, 278–81, 289 (S.D.N.Y. 1998).

products,⁷¹⁰ Panavision movie and television cameras,⁷¹¹ and the Wawa chain of convenience stores.⁷¹² The courts have reached such results only by expansively interpreting the concept of fame,⁷¹³ analyzing fame in a local market,⁷¹⁴ and failing to question whether a mark is famous.⁷¹⁵

One example of this strained interpretation is the acceptance of “niche fame” in a particular product line.⁷¹⁶ In a small enough market, any mark can be “famous,” with such an expansive conception eradicating the requirement of fame.⁷¹⁷ For example, courts have protected products recognized only within the flower basket,⁷¹⁸ sports

710. *Nailtiques Cosmetic Corp. v. Salon Scis. Corp.*, No. 96-2709, 1997 WL 244746, at *3 (S.D. Fla. Jan. 10, 1997).

711. *Panavision Int'l, L.P. v. Toeppen*, 945 F. Supp. 1296, 1302–04 (C.D. Cal. 1996), *aff'd*, 141 F.3d 1316 (9th Cir. 1998).

712. *Wawa Inc. v. Haaf*, 40 U.S.P.Q.2d (BNA) 1629, 1631–33 (E.D. Pa. 1996); *see also* 4 MCCARTHY, *supra* note 61, § 24:92.1, at 24-185 to 24-189 (providing examples of marks that courts deemed famous); Lemley, *Lanham Act*, *supra* note 17, at 1698 (citing additional examples of *Gazette*, *Dennison*, *TeleTech*, *Wedgwood* (for new homes), and *Papal Visit* 1999).

713. *See, e.g., Wilcom Pty. Ltd. v. Endless Visions*, 128 F. Supp. 2d 1027, 1033 (E.D. Mich. 1998) (*Wilcom* embroidery software); *Teletech Customer Care Mgmt., Inc. v. Tele-Tech Co.*, 977 F. Supp. 1407, 1411 (C.D. Cal. 1997) (*Teletech* telephone and Internet customer care); *Intermatic, Inc.*, 947 F. Supp. at 1239 (*Intermatic* electronics).

714. *See, e.g., Times Mirror Magazines, Inc. v. Las Vegas Sports News, L.L.C.*, 212 F.3d 157, 164–65 (3d Cir. 2000) (finding that a sports periodical was famous in its “niche market” and stating that “a mark not famous to the general public is nevertheless entitled to protection from dilution where both the plaintiff and defendant are operating in the same or related markets, so long as the plaintiff’s mark possesses a high degree of fame in its niche market”); *Gazette Newspapers, Inc. v. New Paper*, 934 F. Supp. 688, 694–95, 696–97 (D. Md. 1996) (concluding that the *Gazette* local newspaper was famous); *Wawa*, 40 U.S.P.Q.2d (BNA) at 1631 (finding the “Wawa” convenience store chain in Pennsylvania famous); *Wedgwood Homes, Inc. v. Lund*, 659 P.2d 377, 380 (Or. 1983) (finding that dilution applied to a home builder who was “locally famous” in eastern Washington County, Oregon). *See generally* MERGES ET AL., *supra* note 13, at 640–41.

715. *See, e.g., Panavision Int'l*, 141 F.3d at 1324 (noting that the defendant did not challenge the issue of the mark’s fame); *Archdiocese of St. Louis v. Internet Entm’t Group*, 34 F. Supp. 2d 1145, 1146 (E.D. Mo. 1999) (failing to examine the marks “Papal Visit 1999,” “Pastoral Visit,” “1999 Papal Visit Official Commemorative Items,” and “Papal Visit 1999, St. Louis”). *See generally* Lori Krafte-Jacobs, Comment, *Judicial Interpretation of the Federal Trademark Dilution Act of 1995*, 66 U. CIN. L. REV. 659, 690 (1998) (concluding that courts in half of the cases surveyed “did not make an explicit finding that the mark in question was famous, or made such a finding only by confusing fame with distinctiveness”).

716. *See* 4 MCCARTHY, *supra* note 61, § 24:112, at 24-267 (calling “niche fame” the “‘big fish in a small pond’ theory of relative strength”).

717. *See* 4 *id.* § 24:112.1, at 24-273 (explaining that “the niche fame concept threatens to deform and displace the traditional likelihood of confusion rule”); Courtland L. Reichman, *State and Federal Trademark Dilution*, 17 FRANCHISE L.J. 111, 133 (1998) (warning that the niche fame concept “threatens to overrun trademark infringement law”).

718. *Syndicate Sales, Inc. v. Hampshire Paper Corp.*, 192 F.3d 633, 641 (7th Cir. 1999).

periodicals,⁷¹⁹ and car rental industries.⁷²⁰ But protecting such “niche market” fame is generally not necessary to promote the product-source link. Allowing dilution claims when the first (senior) user has only niche market fame would encourage cases against competitors in the same market, as subsequent (junior) use directed at other markets would have an insignificant effect on the senior mark.⁷²¹ A dilution cause of action, however, is unnecessary in situations of confusion within a market, which present the typical setting for standard infringement analysis.⁷²²

Because it is primarily marks with national fame that provide the product-source link necessary for the development rationale of trademark and that generally lack protection under ordinary infringement analysis, I recommend a defense to a dilution claim when a mark is not nationally famous.⁷²³ Recognition by 50 percent of the general public constitutes one viable threshold for national fame.⁷²⁴ A mark that 50 percent of the general public knows undoubtedly is famous and would likely be diminished as a

719. *Times Mirror Magazines*, 212 F.3d at 165 (3d Cir. 2000).

720. *See Advantage Rent-A-Car, Inc. v. Enterprise Rent-A-Car, Co.*, 238 F.3d 378, 381 (5th Cir. 2001) (noting that the plaintiff’s advertising slogan need only be shown famous within the car rental industry, but finding that the plaintiff did not make this showing).

721. 4 MCCARTHY, *supra* note 61, § 24:112, at 24-240; *e.g.*, *Mead Data Cent. v. Toyota Motor Sales, U.S.A., Inc.*, 875 F.2d 1026, 1031-32 (2d Cir. 1989) (holding that Toyota’s use of “Lexus” for its new luxury automobile did not dilute the mark “Lexus” because the “Lexus” mark was not strong outside of the market for the company’s services).

722. *See Wash. Speakers Bureau, Inc. v. Leading Auths., Inc.*, 33 F. Supp. 2d 488, 503 (E.D. Va. 1999) (“[I]t seems an odd act of statutory interpretation that permits the owner of a famous mark to prevent dilution only by competitors in the owner’s niche market, particularly since in such an instance, relief would likely already be available to the mark’s owner under a § 43(a) infringement theory.”); 4 MCCARTHY, *supra* note 61, § 24:112.1, at 24-273 (“Why the need to invoke the ‘super weapon’ of the antidilution law to resolve what appears to be a garden variety infringement case?”).

723. Alternatively, this can be viewed as a limit on the initial scope of dilution.

724. Similarly, Professor Thomas McCarthy has offered a proposal—in a test with a lower threshold than the one that I advance because of its potential inclusion of niche markets—that “a mark should not be categorized as ‘famous’ unless it is known to more than 50 percent of the defendant’s potential customers.” 4 MCCARTHY, *supra* note 61, § 24:92, at 24-183. Professor McCarthy borrows from the distinction between generic and trademark use based upon the requirement that a majority of customers perceive a trademark. *Id.*; *see also* H.R. REP. NO. 104-374, at 3 (1995), *reprinted in* 1996 U.S.C.C.A.N. 1029, 1030 (stating that “famous marks ordinarily are used on a nationwide basis”); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 25 cmt. e (1995) (requiring that famous marks retain their recognition outside the context of the markets in which the trademark owners use them). Other thresholds, of course, are conceivable, but the 50 percent figure bears the benefits of simplicity and consistency with the analysis that courts conduct in relation to genericide.

consequence of multiple uses in different markets. Coca-Cola,⁷²⁵ Nike,⁷²⁶ and Kodak,⁷²⁷ for example, would fall into this category. Not only would a defense based on a lack of national fame appear entirely reasonable, but it also would restrict courts' expansive application of dilution and would promote the development of a market infused with optimal source identification.

* * *

In conclusion, necessity appears in doctrines that allow expression (genericide, nominative and fair use, and parody) and competition (functionality). Equitable considerations manifest themselves in the defense of laches and in the Anticybersquatting Consumer Protection Act's focus on bad faith. And development would be promoted by recovering a defense to dilution for marks that are not nationally famous.

*D. Right of Publicity Law*⁷²⁸

Two limits based on necessity currently appear, or should be created, in right of publicity law. Courts currently recognize a limit based on the First Amendment, and they should adopt a functional use defense.

1. *Existing Necessity Limit: First Amendment.* The *First Amendment* provides a necessity-based limit on the right of publicity.⁷²⁹ Two rationales lie at the core of the First Amendment:

725. See *Coca-Cola Co. v. Gemini Rising, Inc.*, 346 F. Supp. 1183, 1187 n.1 (E.D.N.Y. 1972) (noting that "Coca-Cola has been described as one of the three most-recognized trademarks in the world" (internal quotation marks omitted)).

726. See *Nike Inc. v. Variety Wholesalers, Inc.*, 274 F. Supp. 2d 1352, 1372 (S.D. Ga. 2003) ("The Court has no difficulty in concluding that the Nike trademarks qualify as famous marks . . .").

727. See *Eastman Kodak Co. v. Rakow*, 739 F. Supp. 116, 117 (W.D.N.Y. 1989) ("The Kodak trademark is perhaps one of the strongest and most distinctive trademarks in this country, if not in the world."); see also 4 MCCARTHY, *supra* note 61, § 24:109, at 24-261 ("Clearly, nationally famous marks like . . . KODAK have the strong, distinctive quality which is deserving of protection from dilution.").

728. In this Section, I offer limits to the right of publicity based primarily on necessity, with equity serving as a supplemental justification for the functional use proposal. Development-based limits are less important in this area than in patent, copyright, and trademark law because increasing the number of celebrities is (most generously considered) not as critical as encouraging new inventions and creative works or even fostering a marketplace infused with optimal source identification.

729. Such a limit recalls the First Amendment limit on the right to exclude in property law. See *supra* notes 309-13 and accompanying text.

preserving a “marketplace of ideas”⁷³⁰ that fosters an “‘uninhibited, robust, and wide-open’ debate on public issues,”⁷³¹ and promoting individual development and self-realization.⁷³² In preventing the invocation of particular celebrity attributes, the right of publicity may threaten these goals.⁷³³

Many courts therefore have limited the right of publicity to allow the operation of the First Amendment.⁷³⁴ Such limits typically occur in the context of newsworthy uses of information and, to a lesser extent, in the context of entertainment-oriented uses.⁷³⁵ Newsworthy uses “attempt to describe, interpret, or assess the real world,”⁷³⁶—for example, by depicting celebrities in the recounting of current events.⁷³⁷ The First Amendment also protects entertainment-oriented uses such as fictionalized history, simulations of actual events, and parodies,⁷³⁸ providing a defense to the right of publicity in the context

730. *Red Lion Broad. Co. v. FCC*, 395 U.S. 367, 390 (1969).

731. *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 340 (1974) (quoting *N.Y. Times Co. v. Sullivan*, 376 U.S. 254, 270 (1964)).

732. *Guglielmi v. Spelling-Goldberg Prods.*, 603 P.2d 454, 458 (Cal. 1979) (Bird, C.J., concurring). A third rationale involves providing avenues of expression that forestall violent societal interruptions. Roberta Rosenthal Kwall, *The Right of Publicity vs. The First Amendment: A Property and Liability Rule Analysis*, 70 IND. L.J. 47, 66 (1994) (citing sources).

733. This control is particularly dangerous given the role played by celebrities in discourse today. *See infra* Part IV.D.2.

734. *But see White v. Samsung Elecs. Am., Inc.*, 971 F.2d 1395, 1399 (9th Cir. 1992) (upholding Vanna White’s right of publicity claim in the context of an advertisement showing a robot standing next to the Wheel of Fortune game board); *Comedy III Prods., Inc. v. Gary Saderup, Inc.*, 21 P.3d 797, 810 (Cal. 2001) (finding no “significant transformative or creative contribution” in “literal, conventional depictions of the Three Stooges”).

735. *See Zimmerman, supra* note 17, at 55 (noting that “the concept of newsworthiness has served as a surrogate for a finding that the defendant’s activity is protected by the first amendment”).

736. Peter L. Felcher & Edward L. Rubin, *Privacy, Publicity, and the Portrayal of Real People by the Media*, 88 YALE L.J. 1577, 1597 (1979).

737. *See, e.g., Montana v. San Jose Mercury News, Inc.*, 40 Cal. Rptr. 2d 639, 641 (Ct. App. 1995) (identifying Joe Montana’s four Super Bowl championships as a “newsworthy event” and holding that posters portraying him in that role were protected by the First Amendment).

738. *Felcher & Rubin, supra* note 736, at 1598; *see, e.g., Joseph Burstyn, Inc. v. Wilson*, 343 U.S. 495, 502 (1952) (“[E]xpression by means of motion pictures is included within the . . . First . . . Amendment[.]”); *Winters v. New York*, 333 U.S. 507, 508, 520 (1948) (holding that a magazine consisting of accounts of “criminal deeds, and pictures and stories of deeds of bloodshed, lust and crime” was protected by the First Amendment); *Guglielmi v. Spelling-Goldberg Prods.*, 603 P.2d 454, 458–59 (Cal. 1979) (explaining that entertainment is entitled to the same level of protection as information because of the difficulty in distinguishing between the two and the role of entertainment in self-expression).

of parodies⁷³⁹ and editorial uses in books,⁷⁴⁰ magazines,⁷⁴¹ and movies and documentary films.⁷⁴²

2. *New Necessity Proposal: Functional Use.*⁷⁴³ Celebrities play a central role in discourse today. In serving as shorthand for concepts such as Michael Jordan's athleticism, John Wayne's masculinity, or Ginger Rogers and Fred Astaire's elegance, they serve a type of *functional use*.⁷⁴⁴ In a world of increasing fragmentation, references to

739. See, e.g., *Cardtoons, L.C. v. Major League Baseball Players Ass'n*, 95 F.3d 959, 969 (10th Cir. 1996) (stressing that the First Amendment protected the plaintiff's right to produce parodic trading cards).

740. See, e.g., *Frosch v. Grosset & Dunlap, Inc.*, 427 N.Y.S.2d 828, 829 (App. Div. 1980) ("The protection of the right of free expression is so important that we should not extend any right of publicity . . . to give rise to a cause of action against the publication of a literary work . . ."); *Rosemont Enterprises, Inc. v. Random House, Inc.*, 294 N.Y.S.2d 122, 128 (Sup. Ct. 1968) ("The biography . . . falls within those 'reports of newsworthy people or events' which are constitutionally protected . . .").

741. See, e.g., *Falwell v. Penthouse Int'l, Ltd.*, 521 F. Supp. 1204, 1210 (W.D. Va. 1981) (holding that the First Amendment protected the defendant's publication of an interview with the plaintiff); *Ann-Margret v. High Soc'y Magazine, Inc.*, 498 F. Supp. 401, 406 (S.D.N.Y. 1980) (holding that the defendant's publication of photographs of an actress without her consent did not infringe her right of publicity).

742. See, e.g., *Benavidez v. Anheuser Busch, Inc.*, 873 F.2d 102, 104 (5th Cir. 1989) (holding that a documentary "prepared and produced as a public service film and for educational purposes" did not misappropriate the plaintiff's identity); *Hicks v. Casablanca Records*, 464 F. Supp. 426, 433 (S.D.N.Y. 1978) (finding that the publication of a novel presenting a fictionalized account of a true event in the plaintiff's life did not violate the right of publicity); *Guglielmi*, 603 P.2d at 461-62 (holding that a documentary utilizing the plaintiff's name and likeness was protected by the First Amendment).

The category of commercial speech to date has not provided a significant limit on the right of publicity, although the Supreme Court's expanded protection of the speech, see *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n*, 447 U.S. 557, 566 (1980) (establishing a four-part analysis for whether a regulation on commercial speech violates the First Amendment), may provide the conceptual framework for such a restraint. See Zimmerman, *supra* note 17, at 55-74 (criticizing distinctions based on the receipt of profits and noting that advertisements often implicate social or political commentary).

743. Although framed in terms of necessity, a functional use defense also draws support from notions of equity. Celebrities attain their position only through the participation of the public and media. See Madow, *supra* note 177, at 188, 195 (referring to fame as a "relational" phenomenon conferred by others and explaining that celebrities do not make their public images "in anything like the way a carpenter makes a chair from a block of wood"). It thus does not seem fair to allow the celebrity to control all uses of the image, including those that are functional and those that recode the image.

744. See Nicholas J. Jollymore, *Expiration of the Right of Publicity—When Symbolic Names and Images Pass into the Public Domain*, 84 TRADEMARK REP. 125, 126-28 (1994) (mentioning the symbolization by Fred and Ginger of "a glamorous and care-free symbol of what American cinema represented during the harsh times which Italy experienced in the 1930s and 1940s" (citation omitted)); Madow, *supra* note 177, at 144-45 (explaining that John Wayne

celebrities are essential for dialogue on issues such as culture and values.⁷⁴⁵ They enable individuals with similar interests to identify one another and form interest groups, and they provide a common framework facilitating debate.⁷⁴⁶ By putting alternative conceptions of celebrity off limits, the right of publicity thus threatens to suppress expression⁷⁴⁷ and to give celebrities the power to censor alternative versions of their images that are, for example, iconoclastic or irreverent.⁷⁴⁸

In contrast, the core of the right of publicity is the protection of celebrities against having their images exploited to sell products.⁷⁴⁹ Advertisers typically use celebrities because of a “star quality” that celebrities project, a quality with which the advertisers wish to associate their products.⁷⁵⁰ The underlying concern about commercial exploitation explains the applicability of the right to the use of the

“stands for . . . rugged individualism, can-do confidence, physical courage, and untroubled masculinity”).

745. *Comedy III Prods. v. Gary Saderup, Inc.*, 21 P.3d 797, 803 (Cal. 2001); see Madow, *supra* note 177, at 128 (noting that celebrities function as “important expressive and communicative resources” and that they are “used . . . to symbolize individual aspirations, group identities, and cultural values” (emphasis omitted)).

746. See Dreyfuss, *supra* note 177, at 139–40 (describing how “merchandising images” have become critical resources for fostering dialogue by facilitating the formation of interest groups and “effective debate among subcultures”). Groups outside the cultural mainstream may form “particularly intense audience-star relationships” as the groups “experience extreme role/identity conflict and pressure, and an (albeit partial) exclusion from the dominant articulacy of . . . adult, male, heterosexual culture.” Madow, *supra* note 177, at 143 (quoting Richard Dyer, *Charisma*, in *STARDOM: INDUSTRY OF DESIRE* 57, 59 (Christine Gledhill ed., 1991)); see also ROSEMARY J. COOMBE, *THE CULTURAL LIFE OF INTELLECTUAL PROPERTIES: AUTHORSHIP, APPROPRIATION, AND THE LAW* 88–129 (1998) (providing numerous examples of fan groups and alternative identities based on celebrities).

747. Madow, *supra* note 177, at 145.

748. See *id.* at 143 (describing the use of Judy Garland’s image by “urban gay men in the 1950s” and lesbians’ contemporary use of the James Dean persona).

749. See *McFarland v. Miller*, 14 F.3d 912, 919 (3d Cir. 1994) (“At its heart, the value of the right of publicity is associational.”); Jollymore, *supra* note 744, at 129 (“[T]he principal interest furthered by the right [of publicity] is an interest in allowing celebrities to protect their livelihood by controlling the use of their names and images to identify their particular services, especially in advertising and other ‘commercial’ contexts.”); Welkowitz, *supra* note 73, at 101 (“In advertising cases such as *White* [*White v. Samsung Elecs. of Am., Inc.*, 971 F.2d 1395 (9th Cir. 1992)], the core interest should be protection against the use of the star quality as a sales vehicle.”).

750. Welkowitz, *supra* note 73, at 77; see *McFarland*, 14 F.3d at 919 (“People link the person with the items the person endorses . . .”).

names of famous professional golfers on a golf game⁷⁵¹ and the use of a familiar, nostalgic voice⁷⁵² and a racecar image symbolizing a rugged nature⁷⁵³ to sell a product.

But many uses, even if they are commercial in nature, do not seek to exploit celebrity images to sell products. For example, Samsung used a robot resembling Vanna White in its advertising campaign only “to convey in especially vivid fashion the abstract concept of durability.”⁷⁵⁴ Vanna was a symbol or metaphor,⁷⁵⁵ not an exploitative hook. The allusions to Vanna, in other words, were not made “to convince Vanna fans to buy the product”⁷⁵⁶ or “to associate the qualities of Vanna White with the qualities of Samsung VCRs.”⁷⁵⁷ Such a metaphorical or functional use, even if not profound, is necessary for dialogue in society today.

The functional use defense thus recognizes that celebrities are utilized for two very different purposes. Some advertisers seek to exploit associational benefits from famous characteristics of celebrities. The right of publicity should in fact prohibit such uses. Sometimes, however, advertisers have a more functional purpose in drawing on celebrity images—using them as shorthand to express ideas. These uses should be entitled to the functional use defense. Given the ubiquity of references to celebrities in discourse today, such a limit is necessary.

751. See *Palmer v. Schonhorn Enterprises*, 232 A.2d 458, 458 (N.J. Super. Ct. Ch. Div. 1967) (holding that a manufacturer could not use well-known golfers’ names to sell a board game without the golfers’ permission).

752. See *Midler v. Ford Motor Co.*, 849 F.2d 460, 461 (9th Cir. 1988) (holding that the imitation of a famous singer’s distinctive voice to sell a product was impermissible).

753. See *Motschenbacher v. R.J. Reynolds Tobacco Co.*, 498 F.2d 821, 822 (9th Cir. 1974) (finding that a commercial suggesting but not identifying directly a racecar driver and his car misappropriated the driver’s distinctive racing image); Welkowitz, *supra* note 73, at 77 (providing as an example a cigarette brand’s use of a racecar image).

754. Paul J. Heald, *Filling Two Gaps in the Restatement (Third) of Unfair Competition: Mixed-Use Trademarks and the Problem with Vanna*, 47 S.C. L. REV. 783, 807 (1995); see also Welkowitz, *supra* note 73, at 78–79 (“[T]he purpose was to make a statement, and the role Vanna White plays was a convenient shorthand for that statement.”).

755. Welkowitz, *supra* note 73, at 78; see also *id.* at 79 (describing a Samsung advertisement’s use of White’s image as a “literary reference”).

756. Heald, *supra* note 754, at 807.

757. Welkowitz, *supra* note 73, at 78. The presence of confusion will often inform the exploitation analysis. See, e.g., *Midler*, 849 F.2d at 463–64 (9th Cir. 1988) (finding confusion); Dogan, *supra* note 60, at 320 (suggesting that, in publicity cases, any evocation right should be limited to those situations in which confusion as to actual celebrity endorsement is likely).

E. Matrix of Intellectual Property Limits

The foregoing limits based on development, necessity, and equity are summarized in the following chart. The chart utilizes normal font to denote existing limits and underlined font to signify my proposals for new or reconstructed limits.

	<i>Copyright</i>	<i>Patent</i>	<i>Trademark</i>	<i>Right of publicity</i>
<i>Development</i>	Productive fair use	<u>Reverse</u> <u>doctrine of</u> <u>equivalents</u> <u>Experimental</u> <u>use</u>	<u>Dilution limit</u>	
<i>Necessity</i>	Exclusions Compulsory licenses First sale <u>Necessary</u> <u>fair use</u>	Government appropriation Sovereign immunity <u>Public health</u> <u>emergencies</u>	Genericide Nominative use Fair use Parody Functionality	First Amendment <u>Functional</u> <u>use</u>
<i>Equity</i>	Copyright misuse Fraud Estoppel Laches <u>Equitable</u> <u>fair use</u>	Inequitable conduct Prosecution laches Patent misuse Exhaustion Implied license Repair Estoppel limits on doctrine of equivalents First inventor defense	Laches Bad faith cybersquatting	

CONCLUSION

IP is more important than ever in today's increasingly information-based economy. IP is more powerful than ever because of its vastly expanded scope and duration. IP is more dangerous than ever in its threats to competition, cumulative innovation, and free expression.

The propertization of IP has encouraged and cemented these trends, and it is too late in the game to reverse course. Courts, legislatures, and the public view IP as absolute property more and more with each passing day. And in amassing nearly unlimited scope and duration in so many facets, IP in fact has begun to resemble property. But if IP can take on the powers of property, it must also be saddled with property's limits. Limits based on development, necessity, and equity have ensured a finely calibrated equilibrium in property law, an equilibrium that is desperately needed in IP.

In addition to recognizing defenses that currently exist in IP, the adoption of my limit-based paradigm would have profound consequences. It would ensure the vitality of the copyright fair use defense by recognizing the development-based nature of transformative use and reverse engineering and by allowing courts to implement necessity-based limits that would enhance democracy and equity-based limits that would recognize social norms.

The paradigm would apply to patent law by allowing courts to strengthen neglected development-based defenses such as experimental use and the reverse doctrine of equivalents and by permitting Congress to create a new necessity-based limit for public health emergencies. The paradigm would restore a crucial development-based limit in trademark law by cabining dilution. And it would proffer a necessity-based functional use defense to restrict the burgeoning right of publicity.

In short, the importation of limits into IP promises to restore the venerable balance that used to characterize the field. If IP cannot be curbed in its initial scope and duration—and Congress has provided no indication that it can—then the only hope for balance is to restrict the powerful rights. By adopting the paradigm of property, IP has reopened the door to limits. Rediscovering these limits offers significant promise for the future of innovation and democracy.