ARTICLES

DISPOSSESSION, INTELLECTUAL PROPERTY, AND THE SIN OF THEORETICAL HOMOGENEITY

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I. INTRODUCTION

In the last several decades, the legal academy has devoted a great deal of attention to developing a cogent definition of "property."[1] During this period, scholars have grappled with the related question of how intellectual property rights—namely, patents,[2] copyrights,[3] trademarks,[4] and trade

1. For a good sampling of the various theories currently espoused by scholars, see Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 541–51 (2005).

2. Patent law grants a statutory monopoly of use for a certain period of time to creators for their inventions—namely, mechanical and other processes that are novel, useful, and nonobvious. *See* 35 U.S.C. §§ 100–212 (2000); *see also infra* Part II.A.

3. Copyright law extends statutory protection for a certain period of time against the nonconsensual use by others of various types of literary, musical, dramatic, and visual works. *See* 17

secrets[5]—fit within emergent property theories.[6] By and large, the academy has concluded that intellectual property qualifies as "property" under all of the relevant analytical rubrics.[7]

As expected, both policy makers and the judiciary have drawn upon the theoretical categorization of intellectual property as "property" when fashioning the normative rules that govern the recognition, allocation, and protection of intellectual property rights. In many instances, traditional property law concepts have been imported into intellectual property law with little or no consideration given to the theoretical and utilitarian distinctiveness of intellectual property. Nowhere is this wholesale importation—and its shortcomings—more apparent than in the law governing sentencing for federal crimes involving the violation of intellectual property rights.

The disarray in criminal sentencing for federal intellectual property crimes is already pronounced and steadily boiling toward a crisis level. The advisory U.S. Sentencing Guidelines[8] governing federal criminal sentencing tie a criminal defendant's sentence for stealing or infringing an intellectual property asset to the "market value" of that asset.[9] This is

U.S.C. §§ 101–122 (2000); *see also infra* Part II.B.

4. Trademark law protects certain "marks"—words or symbols—used in commerce from nonconsensual use by others. *See* 15 U.S.C. §§ 1051–1127 (2000). *See also infra* Part II.C. For example, brand names and popular symbols—for example, the Nike swish—are protected by trademark law.

5. Trade secret law confers protection against disclosure and use of a company's trade secrets—that is, various formulae, processes, computer programs, or other items that have independent value derived from their secrecy. *See* 18 U.S.C. § 1831–1839 (2000). *See also infra* Part II.D. For example, the formula for Coca-Cola soda is an archetypical example of a trade secret.

6. *See, e.g.*, Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1 (2004) (discussing multiple property theories in relation to intellectual property); Tom G. Palmer, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects*, 13 HARV. J.L. & PUB. POL'Y 817 (1990) (examining the "desert" theory); Jeanne L. Schroeder, *Unnatural Rights: Hegel and Intellectual Property*, 60 U. MIAMI L. REV. 453 (2006) [hereinafter Schroeder, *Unnatural Rights*] (examining Hegel's "personality" theory of property).

7. "[Intellectual property] is quickly becoming property not only in the essentially unlimited scope and duration of its initial rights but also in the ubiquitous assertions that [intellectual property] is absolute property." Carrier, *supra* note 6, at 12.

8. Although the Sentencing Guidelines were initially binding on the federal courts, *see* Pub. L. No. 98-473, 98 Stat. 1989 (1984), the Supreme Court in *United States v. Booker*, 543 U.S. 220 (2005), held that their mandatory nature violated the Constitution. *Id.* at 220, 242–44 (opinion of Stevens, J.). The Court then excised certain provisions, rendering a Guidelines-based sentence optional. *Id.* at 245–65 (opinion of Breyer, J.).

9. The Sentencing Guidelines specify that the relevant consideration is the "infringement amount" of the intellectual property asset, U.S. SENTENCING GUIDELINES MANUAL § 2B5.3(b)(1) (2005), which is defined as "the retail price of that item in the market in which it is sold." *Id.* cmt. n.2(C).

precisely the same treatment that the Guidelines specify for the theft of tangible items.[10] But because, unlike tangible goods, no market exists for many intellectual property assets (such as trade secrets or copyrighted movies prior to their release in DVD format),[11] the federal courts—in trying to assign a "market value"—have been forced to consult other valuation models developed in the civil accounting and taxation contexts, such as income and cost models.[12] There has been no consensus on the appropriate approach.[13]

The significance of this confusion, and the resultant disparity in sentencing, is only likely to worsen in the coming years. Congress has steadily expanded federal criminal jurisdiction over intellectual property crimes,[14] and shows no signs of stopping.[15] Public choice theorists would ascribe this trend to the rent-seeking behavior of intellectual property rights holders seeking to maintain and expand the statutory monopolies that intellectual property laws enforce.[16] But this trend may also be the product

10. *Id.* § 2B1.1. This Guideline looks to "loss," but defines "loss" as the "fair market value of the property unlawfully taken or destroyed." *Id.* cmt. n.3(C)(i).

11. *See, e.g.*, Russell Hardin, *Valuing Intellectual Property*, 68 CHI.-KENT L. REV. 659, 664–65 (1993) (noting the lack of markets for "collective goods" such as intellectual property assets).

12. *See infra* Part IV. These are by no means the sole models cited by the courts. *Id.*

13. For a detailed discussion of the current state of the law, see *infra* Part IV.

14. In just the last few years, Congress has expanded the scope of criminal copyright law with the Family Entertainment and Copyright Act of 2005, Pub. L. No. 109-9, 119 Stat. 218, and the scope of criminal trademark protections with the Stop Counterfeiting in Manufactured Goods Act, Pub. L. No. 109-181, 120 Stat. 285–88 (2000).

15. *See, e.g.*, Intellectual Property Enhanced Criminal Enforcement Act of 2006, H.R. 5921, 109th Cong. *See also* Lanier Saperstein, Comment, *Copyrights, Criminal Sanctions and Economic Rents: Applying the Rent Seeking Model to the Criminal Law Formulation Process*, 87 J. CRIM. L. & CRIMINOLOGY 1470, 1509 (1997) ("[T]he shift towards more stringent criminal sanctions for copyright infringement is likely to be the trend for the foreseeable future.").

16. Many scholars attribute the growth of intellectual property crimes to successful lobbying efforts by rights holders and their trade groups. *See* Geraldine Szott Moohr, *Defining Overcriminalization Through Cost-Benefit Analysis: The Example of Criminal Copyright Laws*, 54 AM. U. L. REV. 783, 798 (2005) [hereinafter Moohr, *Defining*] ("Support for criminal copyright laws comes from copyright holders, and the new laws have been characterized as the result of their successful lobbying efforts."); Saperstein, *supra* note 15, at 1483 ("The legislative history demonstrates that industry-specific interests groups were instrumental in driving the shift from copyright law [toward criminal enforcement]."). *See also* Robert P. Merges, *Contracting Into Liability Rules: Intellectual Property Rights and Collective Rights Organizations*, 84 CAL. L. REV. 1293, 1308–16 (1996) [hereinafter Merges, *Contracting*] (same). Because public choice theorists subscribe to the view that "legislation will be more likely to reflect the interests of small but organized groups than the interests of the public at large," Stewart E. Sterk, *Rhetoric and Reality in Copyright Law*, 94 MICH. L. REV. 1197, 1244 (1996), such theorists have argued that the rise in criminal sanctions as an enforcement mechanism is the product of an organized push aimed at creating "monopoly rent"—that is, the profits received from having a statutorily granted monopoly. Saperstein, *supra* note 15, at 1503 ("It is well documented by public choice scholars that there is a high degree of interest group activity where there are specific rents to be captured through legislative mechanisms.").

of the rapid digitalization of media,[17] which permits ever increasing numbers of civil-judgment-proof persons (to whom only the criminal law may be a deterrent)[18] to make identical, high-quality copies[19] of copyrighted works (or trade secrets) at minimal cost.[20] The advisory nature of the Sentencing Guidelines only exacerbates the danger because courts are now freer to select any sentence between probation and the statutory maximum for the crime.[21] Although some judges may be inclined to impose lower sentences as a means of recognizing that intellectual property infringement is not generally perceived to be a serious crime,[22] others may

17. Lydia Pallas Loren, *Digitization, Commodification, Criminalization: The Evolution of Criminal Copyright Infringement and the Importance of the Willfulness Requirement*, 77 WASH. U. L.Q. 835, 853 (1999) ("Digitization of copyrighted works permits rapid and easy [unauthorized] reproduction and distribution . . . ."); Moohr, *Defining*, *supra* note 16, at 788 ("Technological developments like digitalization and broadband make copyrighted material increasingly vulnerable to unauthorized use . . . .").

18. In addition to the trend of holding the individual infringer criminally liable, intellectual property owners are also attempting to obtain civil penalties from entities who facilitate infringement by end-users and who are likely to have deeper pockets. The ultimate efficacy of this avenue of redress is still unknown, although the Court in *MGM v. Grokster, Ltd.*, 545 U.S. 913 (2005), grappled with the issue of vicarious liability and the extent to which a facilitator must know, encourage, or tolerate illegal infringement occurring through the use of its facilities.

19. Mark A. Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement Without Restricting Innovation*, 56 STAN. L. REV. 1345, 1376 (2004) ("[D]igital copies do not degrade in quality from generation to generation . . . .").

20. The ease and inexpensiveness of making digital copies removes barriers to infringement that, in the predigital era, made widespread infringement cost-prohibitive. Loren, *supra* note 17, at 854 (noting how "[d]igital technology . . . requires little investment in capital in order to reproduce copyrighted works on a massive scale"). Consequently, persons without much money—for whom civil penalties are largely meaningless—are now capable of committing intellectual property crimes more readily. *See* Lemley & Reese, *supra* note 19, at 1373–75 (observing how the counterfeiters of intellectual property and the individual end users are becoming the same person "as the costs of producing and disseminating copies approach zero"); Loren, *supra* note 17, at 854 (noting how many infringers are now "judgment proof"); Molly Shaffer Van Houweling, *Distributive Values in Copyright*, 83 TEX. L. REV. 1535, 1545–46 (2005) (noting how copyright penalties are largely useless due to the number of judgment-proof infringers).

21. The maximum sentences for intellectual property crimes range from one year for certain copyright misdemeanor offenses, *see* 17 U.S.C. §§ 506(a)(1), (a)(2) (2000); 18 U.S.C. §§ 2319(b)(3), (c)(3) (2000), to 15 years for the theft of a trade secret for the benefit of a foreign government, agent, or instrumentality, *see* 18 U.S.C. § 1831 (2000).

22. *See* Stuart P. Green, *Plagiarism, Norms, and the Limits of Theft Law: Some Observations on the Use of Criminal Sanctions in Enforcing Intellectual Property Rights*, 54 HASTINGS L.J. 167, 242 (2002) ("As the gap broadens between what the law is and what people think it should be, intellectual property law faces a growing crisis, one which manifests itself in the widespread and flagrant violation of its constraints."). *See also* Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1346 n.10 (1989) (discussing how public opinion affects the perceived legitimacy of intellectual property enforcement, and relating the controversy surrounding legality of VCRs for use in "time shifting" television programs); Moohr, *Defining*, *supra* note 16, at 794–95 ("[T]he significant gap between prevailing social norms and the values embodied in criminal copyright laws is likely to weaken their

choose to impose higher sentences based on Congress's consistent efforts to broaden the scope and increase the severity of federal intellectual property crimes.

In this Article, I argue that this cacophony of judicial approaches to the valuation of intellectual property assets for purposes of criminal sentencing is the visible symptom of an underlying theoretical disharmony: intellectual property may be a species of "property," but this definitional symmetry does not mean that it should thereafter be treated the same as all other species of property.[23] Critically, intellectual property is distinct from most other forms of property because it is a "public good"[24] insofar as it is naturally nonrivalrous (that is, it is not consumed when used)[25] and nonexclusive (that is, more than one person can use it at the same time).[26]

Most scholars agree that it is scarcity which creates value.[27] Physical

deterrent effect.").

23. Some property theorists have started to explore the related notion of "uniformity cost"—that is, the economic inefficiency occasioned by applying uniform rules rather than context-specific rules. Thus far, uniformity cost has been examined primarily within the context of a single type of intellectual property; in other words, the issue has been whether the terms of a patent should be the same for *all* patents or should vary by the type of invention. *See, e.g.*, Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003); Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155 (2002). *See also* Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845, 846–47 (2006). Although this Article does not tie its analysis to uniformity costs, I advocate a similar context-specificity but do so across the fuller array of all property theory, and thus support the ultimate ends of uniformity cost literature. *See* Carroll, *supra*, at 847 n.6 (collecting commentary).

24. A "public good" "denotes goods whose consumption is nonrivalrous and whose benefits are non-excludable." Bell & Parchomovsky, *supra* note 1, at 578. Intellectual property meets this definition: "Once created, intellectual property is a public good, capable of enjoyment by millions without incurring significant extra costs." Sterk, *supra* note 16, at 1236. *See also* Carrier, *supra* note 6, at 32 (noting that intellectual property is a "public good" because "information is nonexclusive and nonrivalrous"); Saperstein, *supra* note 15, at 1494 ("A distinguishing feature of intellectual property is its nature as a public good.").

25. *See* Bell & Parchomovsky, *supra* note 1, at 578 ("Nonrivalrous consumption means that consumption of the good by one person does not rival consumption by another."); Merges, *Contracting*, *supra* note 16, at 1304 ("[Intellectual property rights], unlike other entitlements, can be used simultaneously by more than one person."). *See also* Schroeder, *Unnatural Rights*, *supra* note 6, at 475 ("[T]he use of intellectual property by one person does not seem to interfere with the use by another.").

26. *See* Bell & Parchomovsky, *supra* note 1, at 578 ("Nonexcludability refers to the inability of the good's owner to exclude consumers."); Neel Chatterjee, *Should Trade Secret Appropriation Be Criminalized?*, 19 HASTINGS COMM. & ENT. L.J. 853, 866–67 (1997) ("Ideas and information . . . can be used simultaneously by numerous users. In that respect, intangible information is limitless and inexhaustible."). *See also* Loren, *supra* note 17, at 858 ("Committing an act of infringement . . . does not permanently deprive the copyright owner of her 'property.'"); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 292 (1996) ("Unlike most goods and services, creative and informational works can be enjoyed by unlimited numbers of persons without being consumed.").

27. *See, e.g.*, Palmer, *supra* note 6, at 864 ("The key to all of this is scarcity."). *See also*

goods are inherently scarce because they can be possessed by only one person at a time.[28] By contrast, intellectual property is not, and thus derives its value from an artificial scarcity granted by laws that confer carefully delineated monopolies on the "owner" of the intellectual property.[29] As one might expect, the linchpin of these monopolies is the ability to exclude others from the use and enjoyment of the intellectual property, thereby simulating scarcity where none exists naturally.[30] Despite these efforts to use positive law to create symmetry between the treatment of intellectual property and tangible goods, these theoretical differences remain. Accordingly, it is a mistake to assert that intellectual property, because it qualifies as "property," should be subjected to the same normative rules that govern the treatment of all other forms of property. Homogeneity is simply inapt.

As I discuss more fully, the error of the one-size-fits-all approach to normative property theory is vividly illustrated by the current approach to sentencing for intellectual property crimes (and by its dismal efficacy). When a criminal defendant criminally infringes on intellectual property rights, the Guidelines, as noted above, instruct the courts to ask the question: What is the value of the intellectual property asset?[31] Although that may be the right question to ask when the crime involves the theft of most forms of property (that is, when the item taken is a Gutenberg Bible, a car, or any other tangible item), it is the wrong question to ask when the item infringed upon is an intellectual property asset.

Theft of a tangible item involves two distinct theoretical harms: the owner is dispossessed of the property *and* the owner's use and enjoyment of that property is subject to interference due to the dispossession. In that situation, it is appropriate to sentence the thief on the basis of the full value

Chatterjee, *supra* note 26, at 867 ("The scarcity of any particular resource is what gives the item its value.").

28. Tangible goods derive their scarcity, and hence value, from their physicality. *See* Palmer, *supra* note 6, at 864 ("Tangible goods are clearly scarce in that there are conflicting uses. It is this scarcity that gives rise to property rights."). For example, the Hope Diamond has value because there is only one such diamond in the world, and it can only be possessed by one person at a time.

29. *See* Palmer, *supra* note 6, at 864 ("Intellectual property rights, however, do not rest on a natural scarcity of goods, but on an 'artificial, self created scarcity.'"). *Cf.* Gordon, *supra* note 22, at 1387 ("[A] right against physical intrusion would not enable an intellectual property owner to control most economically significant uses of the intellectual product.").

30. Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 749 (1998) [hereinafter Merrill, *Right to Exclude*] ("Copyrights, patents, trademarks, and trade secrets are all recognized as intangible forms of property. In each case, the core of the property right is the right to exclude others from interfering with or using the right in specified ways . . . ."). *See infra* Part III.

31. *See supra* text accompanying notes 9–10 and *infra* notes 279–82.

of the property because, when the crime is complete, the thief—and only the thief—has the possession and exclusive use of the stolen property. In contrast, the theft of intellectual property involves only interference; the owner is never dispossessed of the asset.[32] To be sure, such interference is critical because there *is* no physical item of which the owner can be dispossessed. But the fact remains that Coca-Cola still possesses the trade secret formula for Coca-Cola Classic,[33] even if someone else also possesses it due to theft.

As I argue below, the theoretically sound approach in imposing sentence for intellectual property crimes is to apply—not the *theft* paradigm under-girding the Guidelines—but instead a *trespass* paradigm, one that focuses on the defendant's interference with the owner's exclusive use and enjoyment of the intellectual property asset. More broadly, this illustrates why it is important to examine critically the nuances of various forms of property and how the multifarious theories defining "property" regard those nuances. In so doing, I argue against theoretical homogeneity in favor of a more discriminating and heterogeneous approach to the translation of definitional theory into practice.

In Part II, I descriptively examine the four primary intellectual property rights that federal law protects—patents, copyrights, trademarks, and trade secrets. This entails an examination of the history of their development as well as their current reach both civilly and criminally. Currently, Congress protects all but patent law with criminal sanctions.

Part III canvasses the leading property theories currently animating academic and judicial discourse. In particular, I discuss the conceptual theory of property (commonly known as the "bundle of rights" theory), the closely related theories of natural law (made prominent by John Locke) and desert, Hegelian "personality" theory, instrumental theories premised on utilitarian policy considerations, and law and economics entitlement theory as espoused by Guido Calabresi and A. Douglas Melamed. What becomes

32. J.E. Penner, *The "Bundle of Rights" Picture of Property*, 43 UCLA L. REV. 711, 808 (1996) ("An owner cannot be dispossessed of his copyright or patent . . . ."). *See also* Loren, *supra* note 17, at 858 ("Committing an act of infringement . . . does not permanently deprive the copyright owner of her 'property.'"). *Accord* Dowling v. United States, 473 U.S. 207, 217 (1985) (observing that a thief of copyrighted works does not "assume physical control over the copyright; nor does he wholly deprive its owner of its use").

33. Ironically, this oft-used example of a trade secret *was* actually stolen by persons attempting to sell the formula to others. The perpetrators are currently being prosecuted. *See* COMPUTER CRIME & INTELLECTUAL PROPERTY SECTION, U.S. DEP'T OF JUSTICE, FEDERAL GRAND JURY INDICTS THREE FOR CONSPIRACY TO SELL COCA COLA COMPANY TRADE SECRETS (2006), *available at* http://www.cybercrime.gov/dimsonind.htm.

evident is that the right of exclusivity is the key under each of these theories, so I discuss where each of the intellectual property rights fall along a spectrum of exclusivity strategies. I demonstrate that intellectual property qualifies as "property" under every one of those theories.

In Part IV, I shift focus from the definitional similarities between intellectual property and other forms of property to the attributes of intellectual property that distinguish it as a subspecies of property—namely, that intellectual property is unique and is a "public good" subject to one of many legally conferred monopolies. It is these distinctions that make it theoretically unwise to treat all subspecies of property identically. In particular, I focus on the current disarray in the area of criminal sentencing for intellectual property crimes caused by the Guidelines' mandate to determine the "value" of the affected intellectual property asset. I argue that this quest for market value is misguided, that a different paradigm should underlie the issue of criminal sentencing, and that a new paradigm based on trespass rather than theft properly recognizes the distinctiveness of intellectual property and therefore aligns more harmoniously with the property theories discussed in Part III.

In Part V, I outline how criminal sentencing under a trespass paradigm would operate. This entails not only a change in the method of assigning "loss" or "value," but also a shift away from emphasis on "loss" or "value" and toward the primary harm of criminal violations of intellectual property rights—that is, the interference with the owner's exclusive right to control those rights. Restructuring the Guidelines along these lines would ostensibly result in sentences that are more consistent with property theory and obviate the current, conceptually mismatched judicial efforts to ascribe a fixed value to intellectual property assets involved in crime. I conclude by noting how this example provides valuable insight into the need to distinguish among subspecies of property when formulating rules that bridge the theory of property and its doctrinal implementation.

II. SPECIES OF INTELLECTUAL PROPERTY

The Constitution itself grants 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."[34] Acting on this grant of authority,[35] Congress has created

34. U.S. CONST. art. I, § 8, cl. 8.

35. Due to this specific grant of authority, Congress has been able to enact criminal laws regulating intellectual property without relying upon the typical constitutional basis for federal criminal

statutory monopolies covering four categories of intellectual property—patents, copyrights, trademarks, and trade secrets. As I discuss in this Part, these categories vary along two axes: the scope of monopoly conferred and the mechanisms available to enforce it.

A. PATENTS

Tracing its lineage back to the First Congress,[36] patent law now provides the process by which inventors can present their innovations to a centralized arbiter—the U.S. Patent and Trademark Office ("PTO")—in hopes of obtaining a state-sanctioned monopoly on their invention.[37] To be eligible for a patent, inventors must demonstrate that they have invented or discovered a new or improved "process, machine, manufacture, or composition of matter"[38] that meets three criteria: it must be novel,[39] useful,[40] and nonobvious.[41]

If the PTO issues a patent, the information in the patent application is made part of the public record,[42] ostensibly so that other inventors can build upon the knowledge contained therein. In exchange, the patent holder is granted the "right to exclude others from making, using, offering for sale

jurisdiction, the Commerce Clause. *See* Perez v. United States, 402 U.S. 146 (1971). Thus far, Congress has apparently not construed its authority under the Copyright and Patent Clause to reach the theft of trade secrets, which Congress treats like other Commerce Clause-based crimes by requiring prosecutors to prove a nexus to interstate or foreign commerce. *See* 18 U.S.C. §§ 1831, 1832 (2000). Scholars debate whether Congress's decision to rely on the Commerce Clause when criminalizing certain intellectual property crimes constrains the power it might otherwise have under the Copyright and Patent Clause. *See* Carroll, *supra* note 23, at 869 nn.101–02 (listing cases and commentary).

36. Patent Act of 1790, ch. 7, 1 Stat. 109.

37. *See generally* 35 U.S.C. §§ 101–157 (2000). *See also* 37 C.F.R. §§ 1.1–1.997 (2000) (regulations governing patent application process).

38. 35 U.S.C. § 101. In the patent application, inventors must include a "specification" (or description of the invention), a "drawing," and an "oath" that the invention is their own. *Id.* §§ 111, 112, 113, 115.

39. Novelty refers to uniqueness. *See id.* § 102. For these purposes, two inventions are considered to be the same if they contain, in the same order, all of the same "elements" or "limitations." *See* Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983).

40. The invention or process must have some practical utility. *See, e.g.*, Brenner v. Manson, 383 U.S. 519 (1966). This obviates the ability to patent abstract ideas or natural phenomena. *See* Diamond v. Diehr, 450 U.S. 175, 185 (1981); Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1593 n.31 (1998).

41. The new innovation must be more than an obvious application of an already existing invention, viewed from the perspective of "a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). Thus, "in general, [the nonobviousness requirement] denies patentability for insubstantial improvements over existing technology." Blair & Cotter, *supra* note 40, at 1594.

42. 35 U.S.C. § 154(a)(4). *Cf. id.* § 122(a) (dictating confidentiality of patent applications prior to granting of a patent).

or selling" the patented invention or any products manufactured using a patented process[43] for a period of twenty years subject to the payment of maintenance fees.[44] This right to exclude applies even against a person who independently develops the same invention, with the patent going to the inventor who first applied for a patent.[45]

If a person "infringes" the patent by "mak[ing], us[ing], offer[ing] to sell, or sell[ing]" the patented invention or process,[46] the patent owner may seek injunctive relief or damages in court.[47] The damages remedy is statutorily defined as "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court."[48] The courts have generally declined to expand on this

43. 35 U.S.C. § 154(a)(1). The scope of the patent granted can be both *broader* and *narrower* than the literal language of the patent itself. It may be *broader* due to the "doctrine of equivalents," which provides that "[t]he scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described." Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 732 (2002) (citing Winans v. Denmead, 56 U.S. (15 How.) 330, 347 (1854)). It may be *narrower* due to the "reverse doctrine of equivalents," which considers new inventions that fit within the literal terms of a prior patent but are nevertheless "so far changed" as to be deemed outside that patent, and, therefore not infringing. Boyden Power-Brake Co. v. Westinghouse, 170 U.S. 537, 568 (1898).

44. 35 U.S.C. §§ 154(a)(2), 271(a). Prior to 1995, a patent lasted seventeen years. *See* 35 U.S.C. §§ 154(a), 271(a) (1988). Many commentators have observed that the "effective length" of the patent is, in relative terms, much longer than twenty years given the exponential speed at which new inventions emerge. *See* Carrier, *supra* note 6, at 17 (arguing that the effective "duration has lengthened as patents have increasingly been utilized in industries with product generation lifecycles shorter than twenty years").

45. This is implicit in the "novelty" requirement, under which a patent must be denied if a prior patent was issued for the same invention, *see* 35 U.S.C. § 102(b) (2000), and a right of priority is given to the first-filed application, § 120. *Cf.* Thomas F. Cotter, *Conflicting Interests in Trade Secrets*, 48 FLA. L. REV. 591, 593 (1996) ("Unlike a patentee, however, the owner of a trade secret cannot exclude one who independently invents or discovers the [trade secret] . . . .").

Indeed, the strength of the exclusionary right of a patent is particularly pernicious in the so-called "blocking patents" situation, whereby one patent owner can effectively block the usefulness of a subsequently granted patent that improves upon, but nevertheless still uses, the earlier patent; the original patent owner's exclusionary right prevails. For a fuller treatment of this issue, see Cotter, *supra* note 45, at 591; Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75 (1994) [hereinafter Merges, *Bargaining Breakdown*]; Robert P. Merges, Comment, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655, 2659–60 (1994) [hereinafter Merges, *Of Property*].

46. 35 U.S.C. § 271(a) (defining "infringement"). There is a limited exemption from infringement for persons who are able to demonstrate that they were, in good faith, using the patent invention or process at least one year prior to the filing of the owner's application. *See id.* § 273(b)(1).

47. *Id.* §§ 281, 282, 283. The courts are empowered to "grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." *Id.* § 283.

48. *Id.* § 284. The court has discretion to treble the damages, *id.*, which typically occurs when the infringement is willful or involves bad faith. Blair & Cotter, *supra* note 40, at 1595–97.

explicitly crafted remedy, and have thus refused to award restitutionary damages based on a disgorgement of the infringer's profits.[49]

At this time, patent infringement is not subject to criminal prosecution.[50]

B. COPYRIGHTS

1. Civil Law

Although patents and copyrights both aim to protect creative works, copyrights focus on "original works of authorship" rather than inventions.[51] Enjoying a pedigree dating back to 1790,[52] the scope of copyright protection has grown steadily over the centuries and now encompasses literary works; musical works; dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; sound recordings; and architectural works.[53] Since 1976, copyright has extended not only to the work itself, but also to compilations that include the work and to derivative works "based upon" the work.[54] One constant requirement, however, is that the authority

49. *See* Blair & Cotter, *supra* note 40, at 1596. There is a limited exception for infringement involving design patents. *See* 35 U.S.C. § 289.

50. *See* Dowling v. United States, 473 U.S. 207, 227 (1985) ("Despite its undoubted power to do so . . . Congress has not provided criminal penalties for distribution of goods infringing valid patents."). A *quasi qui tam* lawsuit for damages exists, however, for falsely marking an invention as being patented. *See* 35 U.S.C. § 292.

51. 17 U.S.C. § 102(a) (2000). Indeed, copyright explicitly excludes those items subject to patent law. *See id.* § 102(b) (definition of "original work of authorship" excludes "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work").

52. *See* Copyright Act of 1790, ch. 15, 1 Stat. 124. Copyright is exclusively federal, preempting any state laws to the contrary. *See* 17 U.S.C. § 301(a) (once copyright is granted, "no person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State").

53. 17 U.S.C. § 102(a). The original Copyright Act only covered books, maps and charts. Act of May 31, 1790, ch. 15, § 1, 1 Stat 124, 124. The other categories were subsequently added. *See, e.g.*, Act of Apr. 29, 1802, ch. 36, § 2, 2 Stat. 171, 171 (engravings and prints); Act of Feb. 3, 1831, ch. 16, § 1, 4 Stat. 436, 436 (musical works); Act of Aug. 18, 1856, ch. 169, 11 Stat. 138, 139 (dramatic works); Act of Mar. 3, 1865, ch. 126, § 1, 13 Stat. 540, 540 (photographs); Act of July 8, 1870, ch. 230, § 86, 16 Stat. 198, 212B (paintings, drawings, and sculptures); Act of Aug. 24, 1912, Pub. L. No. 63-303, ch. 356, 37 Stat. 488, 488 (motion pictures); Act of Oct. 15, 1971, Pub. L. No. 92-140, 85 Stat. 391 (sound recordings); Pub. L. No. 94-533, ch. 1, § 102, 90 Stat. 2541, 2544–45 (dance); Architectural Works Copyright Protection Act, Pub. L. No. 101-650, 104 Stat. 5133 (1990) (architectural works).

54. *See* 17 U.S.C. §§ 101, 103(a). Until 1976, copyright law did not reach derivative works. *See* Act of Oct. 19, 1976, Pub. L. No. 94-553, ch. 1, § 101, 90 Stat. 2541, 2542; *see also* 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) (cataloging derivative uses tolerated).

be "fixed in any tangible medium of expression,"[55] thereby emphasizing that copyright extends only to the *expression* of ideas rather than the ideas themselves.[56]

Once an author creates an original work falling within the ambit of the statute, copyright protection attaches irrespective of whether that work is ever "published,"[57] although a copy of the work is to be deposited with the Library of Congress upon publication.[58] That protection confers a limited monopoly upon the copyright owner, empowering him to have the "exclusive right" to reproduce the copyrighted work;[59] to prepare derivative works based upon the work; to distribute copies of the work to the public by sale, rental, or lease; and to perform or display that work publicly.[60] This protection lasts for the life of the author plus seventy years.[61]

The copyright holder's monopoly is limited. In addition to the temporal limitation built into the initial grant of protection, copyrighted works also may be subject to "fair use"—that is, portions of copyrighted works may be used for educational and other noncommercial purposes without the owner's consent.[62] Moreover, the exclusionary rights attaching to certain works are curtailed entirely because certain uses of those works are exempted from copyright coverage altogether[63] or are subject to a

55. 17 U.S.C. § 102(a).

56. *See* Baker v. Selden, 101 U.S. 99 (1879). In a similar vein, a copyright attaches only to the expression—not to the tangible object in which it may be lodged. *See* 17 U.S.C. § 202 ("Ownership of a copyright . . . is distinct from ownership of any material object in which the work is embodied.").

57. *See* 17 U.S.C. § 104(a) (conferring protection on unpublished works), § 104(b) (conferring protection on published works).

58. 17 U.S.C. § 407.

59. The 1790 Act granted exclusivity *only* as to this right, and did not reach many other of the now-prohibited acts of infringement. Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124. *See supra* notes 25–26. *Accord* Carrier, *supra* note 6, at 14.

60. *See* 17 U.S.C. § 106.

61. 17 U.S.C. § 302(a). The original Copyright Act conferred protection for only fourteen years, with the option to renew for another fourteen years. Congress has steadily increased the duration of copyright protection before adopting the current duration in 1998. *See* Carrier, *supra* note 6, at 13 n.20. For anonymous authors, copyright protection now lasts for ninety five years from publication or one hundred and twenty years from creation, whichever expires first. *See* 17 U.S.C. § 302(c).

62. 17 U.S.C. § 107. In 1976, Congress codified the then-extant "fair use" exception fashioned by the judiciary. The statute instructs courts to rely upon a multi-factor test in determining whether a particular use is a "fair use." These factors include (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." *Id.* These factors were intended to mirror the caselaw, as Congress itself noted. H.R. REP. NO. 94-1476, at 66 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5679.

63. *See, e.g.*, 17 U.S.C. §§ 108(a), 109(a), 110, 113(d), 117, 120, 121.

compulsory license that empowers certain persons to use those works without the author's consent in exchange for a royalty fee.[64]

Should a person violate any of these exclusive rights, authors may initiate an action for infringement,[65] where they can obtain injunctive relief,[66] damages,[67] impoundment and destruction of any unauthorized copies,[68] and attorney's fees and costs.[69] No suit may be brought, however, unless authors first register their works with the Copyright Office,[70] which is a strong incentive for authors to disclose their works and make them part of the public domain.[71] It is a particularly powerful incentive given that the damages for infringement include the copyright owner's actual damages[72] and any additional profits of the infringer,[73] *or* statutory damages that can range from a $200 minimum for innocent infringement to $150,000 for willful infringement *per copyrighted work*.[74]

64. Such licenses are available to a cable, satellite, or other carriers retransmitting copyrighted works in certain situations, *see* 17 U.S.C. §§ 111(c), (d), to entities that transmit public performances and certain other copyrighted works and wish to make additional copies of the work, *id.* § 112(e); to entities wishing to transmit certain digital audio transmissions, *id.* §§ 114(d), (f), (g), to entities wishing to distribute for private use copyrighted nondramatic music works, *id.* §§ 115 (a), (b), (c), to the modern-day equivalent of jukebox owners, *id.* § 116, to public broadcasting systems wishing to transmit certain copyrighted works, *id.* § 118, and to superstations and satellite companies wishing to rebroadcast local and other copyrighted programming, *id.* §§ 119, 122.

The royalty is either fixed or determined on a case-by-case basis by Royalty Judges. *See* 17 U.S.C. §§ 801–804. *See also* 37 C.F.R. §§ 251.1–251.73 (2000).

65. 17 U.S.C. § 501 (defining "infringement" and conferring a right "to institute an action for any infringement").

66. *Id.* § 502 (authorizing issuance of injunctive relief with nationwide effect).

67. *Id.* § 504. Courts are not free to fashion new remedies. Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 430 (1984) ("The remedies for infringement 'are only those prescribed by Congress.'" (quoting Thompson v. Hubbard, 131 U.S. 123, 151 (1889))).

68. 17 U.S.C. § 503.

69. *Id.* § 505.

70. *See id.* § 411 ("[N]o action for infringement of the copyright in any United States work shall be instituted until preregistration or registration of the copyright claim has been made . . . .").

71. Congress has provided additional incentives to register or publish a work as well. First, a registered copyright is deemed to be prima facie evidence of validity of copyright in not only infringement actions, but also other legal actions. *See id.* §§ 408–409, 410(c). Second, authors who publish their works can provide notice and negate a defense of innocent infringement. *Id.* §§ 401(d), 402(d). *Cf. id.* § 405(b).

72. *Id.* §§ 504(a)(1), (b).

73. *Id.*

74. The typical range for statutory damages is $750 to $30,000, "as the court considers just." *Id.* § 504(c)(1). Where the infringement is willful, the maximum statutory damages figure raises to $150,000; where it is innocent (that is, the "infringer was not aware and had no reason to believe that his or her acts constituted an infringement of copyright"), the minimum statutory damages figure drops to $200. *Id.* § 504(c)(2). An alleged infringer with a colorable claim to "fair use," as specified in the statute, is exempted from statutory damages altogether. *Id.*

In 1998, Congress enacted the Digital Millennium Copyright Act.[75] The Act expanded the scope of copyright law to reach beyond infringement of the work itself to interference with the technological devices that owners use to protect their copyrighted work from unauthorized infringement.[76] Under this law, a copyright owner can sue any person who "circumvent[s] a technological measure that effectively controls access to a [copyrighted] work"[77] as well as any person who manufactures or traffics in such technologies.[78] As with infringement actions for the copyrighted work itself, the court may award injunctive relief, seizure and destruction of the technology-circumventing devices, costs and attorney's fees, and the owner's choice of actual damages and the infringer's profits *or* statutory damages ranging from $200 to $2,500 *per violation*.[79]

2. Criminal Law

For more than a century, the sole remedy for copyright infringement was a civil suit by the copyright owner. Until 1897, copyright infringement was solely a matter of civil law. At first, criminal copyright violations were at most misdemeanor offenses, and only then if done willfully and for profit.[80] Criminal jurisdiction over copyright offenses has exploded in the last thirty years. Congress created the first felony in 1982,[81] and eliminated the profit requirement for certain crimes in 1997,[82] and the willfulness

75. Digital Millenium Copyright Act, Pub. L. No. 105-304, § 103(a), 112 Stat. 2863 (1998) (prior to 1999 amendment). The Act was amended in 1999. *See* Consolidated Appropriations Act, Pub. L. No. 106-113, Div. B, § 1000(a)(9), 113 Stat. 1536, 1501A-594 (1999). The Act has been roundly criticized as taking copyright law "too far." *See, e.g.*, David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673 (2000).

76. *See* 17 U.S.C. §§ 1201–1204. The Act also prohibits falsifying, altering, or removing "copyright management information," which is defined as information identifying the work and the limitations on licenses for its use. *See id.* § 1202.

77. 17 U.S.C. §§ 1201(a)(1)(A), 1203 (authorizing civil action).

78. 17 U.S.C. §§ 1201(a)(2), (b)(1). Congress built certain restrictions into the Act, by limiting the initial duration of the circumvention prohibition, *see id.* § 1201(a)(1)(A), carving out exceptions for libraries, educational institutions, and archives, *see id.* § 1201(d), and exempting activities aimed at reverse engineering, encryption research, and security testing, *see id.* §§ 1201(f), (g), (j).

79. *Id.* §§ 1203(b), (c). For violations of the copyright management provision, *id.* § 1202, the statutory damages range from $2,500 to $25,000 per violation, *id.* § 1203(c)(3)(B).

80. *See* Act of Jan. 6, 1897, 29 Stat. 481, 481–82; Copyright Act of Mar. 4, 1909, ch. 320, § 28, 35 Stat. 1075, 1082, 1084; Act of Oct. 19, 1976, Pub. L. No. 94-553, ch. 1, § 101, 90 Stat. 2541, 2542.

81. Piracy and Counterfeiting Amendments Act of 1982, Pub. L. No. 97-180, 96 Stat. 91.

82. *See* No Electronic Theft ("NET") Act, Pub. L. No. 105-147, 111 Stat. 2678 (1997). The misdemeanor threshold is lower, and is triggered by willful copying or distributing ten or more copies having a combined retail value exceeding $1,000. *Id.* For a criticism of Congress's elimination of the profit requirement, see Loren, *supra* note 17, at 849–60.

requirement for others in 2005.[83]

It is currently a felony to (1) infringe a copyright by any means "for purposes of commercial advantage or private financial gain" by distributing ten or more copies with a combined retail value of $2,500 or more;[84] (2) infringe a copyright by copying or distributing ten or more copies with a combined retail value of $2,500 or more;[85] (3) distribute over the Internet a movie or musical recording prior to its release to the public;[86] (4) knowingly and for profit record a live musical performance;[87] and (5) knowingly camcord a movie.[88] It is a misdemeanor to copy or distribute one or more copies with a combined retail value of more than $1,000, either for profit or by copying and distributing it.[89]

C. TRADEMARKS

Unlike patent or copyright law, trademark law is focused more on enhancing commercial markets rather than protecting the manufacturers themselves.[90] For over half a century now, Congress has granted comprehensive statutory protection to the owners of "marks" that are actively used in the sale of goods or services.[91] To obtain this protection, the owner must register the mark with the U.S. Patent and Trademark

83. *See* Family Entertainment and Copyright Act of 2005, Pub. L. No. 109-9, 119 Stat. 218 (codified as amended at various sections of titles 17 and 18 of the U.S. Code) (creating new crime of distributing work prepared for commercial distribution) and 18 U.S.C. § 2319B (2000) (creating new crime for camcording movies). The camcording and fixation of musical performances offenses have a *mens rea* of "knowingly"—which is less than the "willful" *mens rea* attendant to most copyright crimes. *Compare* 18 U.S.C. § 2319 *with* 18 U.S.C. § 2319B *and* 18 U.S.C. § 2319A.

84. 17 U.S.C. § 506(a)(1)(A); 18 U.S.C. § 2319(b)(1).

85. 17 U.S.C. § 506(a)(1)(B); 18 U.S.C. § 2319(c)(1).

86. 17 U.S.C. § 506(a)(1)(C); 18 U.S.C. § 2319(d)(1).

87. 18 U.S.C. § 2319A.

88. *Id.* § 2319B.

89. *See* 17 U.S.C. §§ 506(a)(1)(A), (a)(1)(B); 18 U.S.C. §§ 2319(b)(3), (c)(3). These misdemeanors become felonies for repeat offenders who have previously been convicted of copyright offenses. *See* 18 U.S.C. §§ 2319(b)(2), (c)(2).

90. Also unlike patent and copyright law, federal law does not occupy the field of trademark regulation, and many states prohibit trademark infringement. The Court in *Park 'N Fly, Inc. v. Dollar Park and Fly, Inc.*, 469 U.S. 189 (1985), stated that:

> Congress enacted the Lanham Act in 1946 in order to provide national protection for trademarks used in interstate and foreign commerce. Previous federal legislation . . . reflected the view that protection of trademarks was a matter of state concern and that the right to a mark depended solely on the common law.

Id. at 193 (citation omitted). This Article focuses on federal trademark protections.

91. The statute provides protection to "trademarks" and "service marks," which are defined as "any word, term, name, symbol, or device, or any combination thereof" to be used in commerce "to identify and distinguish" goods or services "from those manufactured or sold by others and to indicate the source of the goods." 15 U.S.C. §§ 1114, 1125, 1127 (2000).

Office by demonstrating that the mark is "distinctive"[92] and does not "so resemble" an already existing mark that it "is likely . . . to cause confusion, to cause mistake or to deceive" consumers.[93] If the application is accepted and added to the Principle Register of Trademarks, the mark owner has an "exclusive right to use the registered mark in commerce on or in connection with the goods or services specified in the [trademark] certificate."[94] Unless abandoned by nonuse, this exclusive right lasts for a period of ten years, and is renewable for additional ten-year periods.[95]

A trademark owner has several remedies available. The owner may bring a lawsuit to enjoin anyone from using, reproducing, counterfeiting, copying, or colorably imitating the registered mark.[96] The owner or any other damaged party also may sue any person who uses an unregistered mark, any false designation of origin, or any false or misleading description or representation of fact in conjunction with the sale of a good or service that "is likely to cause confusion, or to cause mistake, or to deceive" vis-à-vis a registered mark.[97] In this action, the plaintiff may obtain injunctive relief[98] as well as the choice of either actual damages (including treble damages)[99] *or* statutory damages.[100]

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92. The Supreme Court has decreed that a good or service may be (1) inherently distinctive or (2) may acquire distinctiveness through usage. Wal-Mart Stores, Inc. v. Samara Bros., Inc., 529 U.S. 205, 210–11 (2000) (citations omitted).

93. 15 U.S.C. § 1052. *See id.* § 1051 (registration procedures); *id.* §§ 1052, 1052(d) (setting forth registration requirements for trademarks); *id.* § 1053 (adopting same rules for service marks).

94. *Id.* § 1057(b).

95. *Id.* §§ 1058, 1059.

96. *Id.* § 1114(1). In this lawsuit, damages are unavailable unless the owner can show that the defendant acted "with knowledge that such imitation is intended to be used to cause confusion, or to cause mistake, or to deceive." *Id.* This knowledge may be constructive if the owner uses the "®" symbol on the good or service. *See id.* § 1111.

97. *Id.* § 1125(a)(1)(A). This provision also makes it actionable, while advertising, to "misrepresent[] the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities." *Id.* § 1125(a)(1)(B).

None of these actions applies when the alleged infringer is trafficking in authentic goods, such as "grey-market" goods (authentic goods intended for sale outside the United States) or "overrun" goods (authentic goods produced in excess of what the trademark owner authorized). *See id.* § 1116(d)(1)(B) (excluding authorized goods). Because the marks are attached to genuine goods, the infringer is not liable under trademark law, although contract remedies may be available.

98. *Id.* § 1116.

99. Actual damages include the infringer's profits as well as the plaintiff's damages. *Id.* § 1117(a). Treble damages are available in the court's discretion, as it deems "just," *id.*, but are not to be imposed absent "extenuating circumstances," when an infringer uses the mark "intentionally" and while "knowing such mark or designation is a counterfeit mark," *id.* § 1117(b).

100. Statutory damages, which are available when the mark is used in conjunction with counterfeit goods or services, can range from $500 to $100,000 per counterfeit mark per type of goods or services, "as the court considers just." *Id.* § 1117(c)(1). Where the infringer acted willfully, statutory damages of

The breadth of trademark remedies has also blossomed within the last several decades. Trademark law is no longer limited to misuse of the mark itself or symbols and words that are "identical with, or substantially indistinguishable from" a mark.[101] Since 1995,[102] the owners of a "famous mark"[103] have also been able to enjoin others from using any mark or trade name that is "likely to cause dilution by blurring or dilution by tarnishment of the famous mark."[104] This trademark dilution action enables famous mark owners to stop others from using their marks outside their registered uses as long as the others' use would harm the value of that mark, even where consumers are not actually confused or even likely to be confused.[105] Along similar lines, the Supreme Court has affirmed that trademark protection can attach to distinctive "trade dress"—that is, the design or packaging of products and services.[106]

At the same time Congress was expanding the universe of copyright crimes, it was for the first time using the criminal law to enforce trademarks. In 1984,[107] it became a federal crime to intentionally traffic or

up to $1 million per mark per type of goods or services are authorized "as the court considers just." *Id.* § 1117(c)(2).

101. *See id.* § 1127 (pulling from definition of a "counterfeit" mark, which ties with the language in the civil action provisions).

102. *See* Federal Trademark Dilution Act of 1995, Pub. L. No. 104-98, § 3(a), 109 Stat. 985 (codified as amended at 15 U.S.C. § 1125(c)(1) (2000)).

103. 15 U.S.C. § 1125(c)(2). Commentators have complained that the courts are not interpreting the "famous" requirement seriously, and are thereby extending dilution actions beyond Congress's intent. *See* Carrier, *supra* note 6, at 20. Ostensibly to address this concern, Congress recently narrowed the definition of "famous mark." *See* Trademark Dilution Revision Act of 2006, Pub. L. No. 109-312, 120 Stat. 1730.

104. *See* Trademark Dilution Revision Act of 2006, § 2, Pub. L. No. 109-312, 120 Stat. 1730 (adopting "likelihood of dilution" standard). *Cf.* Moseley v. V Secret Catalogue, Inc., 537 U.S. 418, 432–33 (2003) (interpreting prior version of Dilution Act to require proof of actual dilution).

Recently, Congress made clear that relief is confined to injunctive remedies unless the civil defendant "willfully intended to trade on the recognition of the famous mark" or "willfully intended to harm the reputation of the famous mark." 15 U.S.C. § 1125(c)(5)(B). In those circumstances, either actual or statutory damages become available. *Id.*

105. *See* Clarisa Long, *Dilution*, 106 COLUM. L. REV. 1029, 1030–31 (2006) ("By contrast, dilution grants trademark holders a remedy for the use of their famous marks by another even when consumers are not confused.").

106. *See* Wal-Mart Stores, Inc. v. Samara Bros., Inc., 529 U.S. 205, 216 (2000) (holding that trade dress as to products is covered by federal law as long as the color or design that comprises the trade dress has "acquired distinctiveness"). It is unclear whether the requirement of acquired distinctiveness applies to other attributes that constitute trade dress apart from products. *See, e.g.*, Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992) (holding that a restaurant's decor can be protected as "trade dress" as long as it possesses either "inherent" or "acquired" distinctiveness).

107. Prior to 1984, Congress had criminalized a related activity—using a counterfeit label in conjunction with the sale of records. *See* Act of Oct. 9, 1962, Pub. L. No. 87-773, § 1, 76 Stat. 774 (codified as amended at 18 U.S.C. § 2318 (2000)). Congress has since expanded this statute to reach

attempt to traffic in counterfeit goods or services while knowingly using a counterfeit mark on or in connection with those goods or services.[108] Last year,[109] Congress expanded the scope to reach possession of counterfeit goods with intent to distribute,[110] added to the universe of items covered,T[111] and eliminated the requirement that the trafficking involve an exchange for consideration.[112]

D. TRADE SECRETS

Trade secrets are unique among the categories of intellectual property because they derive their value not from being publicly disclosed as patented inventions, copyrighted works, and trademarks typically are, but from remaining undisclosed. Trade secrets encompass any knowledge—ranging from source code for computer software to industrial processes to the formula for Coca-Cola—that has independent value *because* of its secrecy.[113] Thus, a trade secret is no longer protected if the owner includes the secret in a patent application or in a copyright registration

documentation and packaging (as well as labels) that are attached to not only records, but also motion pictures and computer software. 18 U.S.C. § 2318(a) (2000). Because this statute has no direct link to the PTO, Congress has imposed a requirement that the mails be used or that the item to which the counterfeit label is attached be attached to a copyrighted work, *see id.* § 2318(c), thereby creating a sufficient federal nexus to warrant exercise of the Copyright or Commerce powers of Congress. *See supra* note 35.

108. Act of Oct. 12, 1984, Pub. L. No. 98-473, Title II, § 1502(a), 98 Stat. 2178 (codified as amended at 18 U.S.C. § 2320 (2000)). The statute defined "counterfeit mark" as "a spurious mark" (1) "that is used in connection with trafficking in goods or services"; (2) "that is identical with, or substantially indistinguishable from, a mark registered for those goods or services on the principle register in the United States Patent and Trademark Office and in use, whether or not the defendant knew such mark was so registered;" and (3) "the use of which is likely to cause confusion, to cause mistake, or to deceive." 18 U.S.C. § 2320(d). This definition necessarily precludes prosecution premised on an unregistered mark.

109. Stop Counterfeiting in Manufactured Goods Act, Pub. L. No. 109-181, §§ 1(b), 2(b), 120 Stat. 285–88 (2000).

110. 18 U.S.C. § 2320(e)(2).

111. In particular, the statute now prohibits trafficking in not only "goods" and services," but also "labels, patches, stickers, wrappers, badges, emblems, medallions, charms, boxes, containers, cans, cases, hangtags, documentation, or packaging of any type or nature." *Id.* § 2320(a).

112. *See id.* §§ 2320(e)(2), (e)(3).

113. Ultimately, Congress defined a "trade secret" as having two key attributes: (1) "the owner thereof has taken reasonable measures to keep such information secret;" and (2) "the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public." *Id.* § 1839(3). This definition is substantially similar to the definition of "trade secret" included in the Uniform Trade Secrets Act, *see* NAT'L CONFERENCE OF COMM'RS ON UNIF. STATE LAWS, UNIF. TRADE SECRETS ACT § 1(4) (1985) [hereinafter UNIF. TRADE SECRETS ACT], although it may be broader in some respects, *see* Michael Coblenz, *Intellectual Property Crimes*, 9 ALB. L.J. SCI. & TECH. 235, 287–91 (1999).

application,[114] or if a competitor is able to independently develop or reverse engineer the secret from the publicly sold end-product.[115]

Although the Supreme Court has recognized that a trade secret has constituted "property" since 1984,[116] Congress took no action to confer generalized federal protection on trade secrets property until 1996.[117] Even then, Congress enacted a very narrow statute, thereby leaving primary responsibility for protecting trade secrets with the states.[118] Most notably, Congress created a statute that made it a crime to knowingly possess, copy, deliver, or steal a trade secret (1) that is related to a product in interstate or foreign commerce, if done so to injure the owner and benefit someone else; or (2) intending or knowing that the offense will benefit any foreign government, agent, or instrumentality.[119] Attendant to the authorization to pursue criminal prosecutions, Congress also empowered the Attorney General to seek civil remedies to enjoin violations that would otherwise constitute violations of the criminal provisions.[120] Congress did not create a civil remedy available to aggrieved trade secret owners, thereby leaving federal enforcement of trade secret rights—and any opportunity to obtain restitution[121] or fines[122]—to the federal government.

114. Both processes entail disclosure of the invention or creative work. *See supra* text accompanying notes 42, 70–74. Congress has empowered courts to issue protective orders to ensure that disclosure in the course of litigation does not vitiate the secrecy of the trade secret. *See* 18 U.S.C. § 1835.

115. *See* Coblenz, *supra* note 113, at 294 (noting how defenses of independent development, reverse engineering, and lack of secrecy apply in trade secrets cases).

116. Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1003–04 (1984) (holding that research and formulae for pesticides were trade secrets and qualified as property within the meaning of the Fifth Amendment's Taking Clause).

117. Economic Espionage Act of 1996 ("EEA"), Pub. L. No. 104-294, 110 Stat. 3488 (codified as amended at 18 U.S.C. §§ 1831–1839). Prior to this, the sole federal trade secret protection prohibited the unauthorized disclosure of confidential governmental information by government employees. *See id.* § 1905.

118. A majority of the states have adopted some form of the Uniform Trade Secrets Act, which provides for civil lawsuits for the theft of trade secrets. *See* Coblenz, *supra* note 113, at 284 n.252 (collecting state statutes). Several of these states supplement the civil enforcement mechanism with criminal sanctions. *Id.* at 285 n.253.

119. 18 U.S.C. §§ 1831–1832. For the foreign espionage crime, Congress intended a broad reading of the term "benefit." Although not defined in the statute, the legislative history indicates that Congress intended the term "benefit" to reach beyond economic benefit and also to reach reputational, strategic, and tactical benefits. *See* H.R. REP. NO. 104-788, at II (1996), *reprinted in* 1996 U.S.C.C.A.N. 4021, 4030. "Foreign instrumentality" and "foreign agent" are defined to reach a broad array of persons and entities associated with foreign governments. *See* 18 U.S.C. §§ 1839(1), 1839(2).

120. *See* 18 U.S.C. § 1836(a) ("The Attorney General may, in a civil action, obtain appropriate injunctive relief against any violation of this [section].").

121. Restitution is mandatory in federal prosecutions occurring after 1994, and requires the defendant to return any stolen property and pay the greater of "the value of the property on the date of the damage, loss, or destruction" or "the value of the property on the date of sentencing," in addition to

III. DEFINITIONAL SYMMETRY AND THE CENTRALITY OF EXCLUSION

The prolific academic literature on the nature of property has spawned several theories as to when a particular item—be it a tangible item, an intangible idea, or a chose in action—qualifies as "property."[123] In this Part, I examine the six leading definitional theories and explain how intellectual property meets their criteria.[124] I further distill the common denominator of each theory—namely, that there exists a "right to exclude"—and explore where intellectual property rights fall along the spectrum of exclusionary strategies. In this fashion, this Part establishes the definitional symmetries and asymmetries of intellectual property vis-à-vis other forms of "property."

A. THE DEFINITIONAL THEORIES OF PROPERTY

1. The Conceptual/Bundle of Rights Approach

Under this formalistic theory, what constitutes "property" is contingent upon whether the owner of an item, idea, or chose in action (the "thing," for lack of a better word) possesses a certain quanta of conceptual rights with respect to it. In other words, things become "property" if they are comprised of a particular set—or bundle—of necessary or sufficient conditions or criteria.[125] As one might surmise, this has come to be known as the "bundle of rights" theory. Today, it is the most widely accepted theory underlying the concept of property, and predominates much

reimbursement costs for lost income or other expenses caused by the offense of conviction. *See id.* §§ 3663A(a), (b).

122. The sentencing court has discretion in determining whether to impose a fine. *See id.* § 3571.

123. Property ownership requires an institutional structure capable of enforcing property rights. *See* Merrill, *Right to Exclude*, *supra* note 30, at 733 ("[P]roperty cannot exist without some institutional structure that stands ready to enforce it."). Absent any such structure, property ownership would devolve into a system predicated solely on possession, which would conclusively eliminate intellectual property as a type of property because there is nothing to physically possess. *Accord* Bell & Parchomovsky, *supra* note 1, at 556 ("The emergence of legal protection . . . makes possible the temporary separation of ownership and possession. Without property protection, asset holders would be extremely reluctant to surrender possession because possession would be their only cognizable interest.").

124. I recognize that other scholars have used different classifications of various property theories. *See, e.g.*, Bell & Parchomovsky, *supra* note 1, at 541–51; Carrier, *supra* note 6, at 31–32; Merrill, *Right to Exclude*, *supra* note 30, at 734–39; Penner, *supra* note 32, at 721–23. There appears to be no one way to classify the various theories and I make no attempt to do so in this Article.

125. *See* Bell & Parchmovsky, *supra* note 1, at 543–46; Penner, *supra* note 32, at 712.

academic discourse and judicial philosophy.[126]

Under this theory, property rights refer to in personam rights that run between the property owner and other members of society who have a corresponding duty to honor the owner's rights.[127] The crux of the conceptual theory continues to be the task of prescribing which rights are necessary for a thing to qualify as property. Wesley Hohfeld wrote that property involves, not only rights, but also privileges, powers, and immunities.[128] A.M. Honoré added a new gloss, and defined eleven "incidents" of property ownership that typically exist.[129] These scholars

126. Bell & Parchomovsky, *supra* note 1, at 546 ("Today, the bundle of rights conception of property rules the academic field."); Carrier, *supra* note 6, at 53 ("The bundle of rights theory currently predominates in the courts."); Penner, *supra* note 32, at 712 ("The currently prevailing understanding of property in what might be called mainstream Anglo-American legal philosophy is that property is best understood as a 'bundle of rights.'"); Lior Jacob Strahilevitz, *Information Asymmetries and the Rights to Exclude*, 104 MICH. L. REV. 1835, 1836 (2006) ("The American law generally regards the 'bundle of rights' as property's dominant metaphor."). The Supreme Court has repeatedly relied upon the "bundle of rights" theory in formulating property law. *See, e.g.*, Dolan v. City of Tigard, 512 U.S. 374, 384 (1994) (describing "the right to exclude others [as] 'one of the most essential sticks in the bundle of rights that are commonly characterized as property'") (citation omitted); Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1011 (1984) (same); Andrus v. Allard, 444 U.S. 51, 65–66 (1979) (referring to a property owner's "possess[ion of] a full 'bundle' of property rights"); Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979) (referring to "the most essential sticks in the bundle of rights that are commonly characterized as property").

127. These rights resemble in rem rights insofar as they respect a specific piece of property, but are not in rem rights because they do not run between a person and the property itself. William Blackstone originally conceived of property as a bundle of in rem rights. *See* WILLIAM BLACKSTONE, 2 COMMENTARIES *1–15, *20–43. But his view has largely been displaced by Wesley Hohfeld's reconception of in rem rights as multital in personam rights—that is, in personam rights between the owner and "a very large and indefinite class of people." WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING AND OTHER LEGAL ESSAYS 72 (Walter Wheeler Cook ed., 1923). *Accord* Bell & Parchomovsky, *supra* note 1, at 544 (describing that Hohfeld "reconceived of in rem rights as mere expressions of in personam rights vis-à-vis an indefinitely large class of people"). *See also* Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719, 1791–92 (2004) [hereinafter Smith, *Property Rules*] (defining "multital" rights, and contrasting them with "paucital" rights that run between just two individuals).

128. Hohfeld defined a "privilege" as the ability of the right holder to engage in the very conduct prohibited to others by the property right (for example, by using the property). HOHFELD, *supra* note 127, at 38–50. He defined a "power" as having the capacity to alter the legal status of a person owing the power-holder a liability (for example, by selling the property). *Id.* at 50–66. An "immunity" is a legal immunity against others exercising the rights of ownership. *Id.* at 60–63.

Property also involves "thinghood." "For an owner to have a right to a thing, there must be a distinguishable owner and a distinguishable thing." Penner, *supra* note 32, at 803. As Penner aptly explains, certain in personam rights—such as a medical license or a marriage contract—are not separable from the person holding them and thus cannot be deemed "property" even if they otherwise possess the requisite definition of property. *Id.* at 803–05.

129. As Honoré explained:

> Ownership comprises the right to possess, the right to use, the right to manage, the right to the income of the thing, the right to the capital, the right to security, the rights or incidents of

were searching for an irreducible minimum number of rights or incidents.[130]

As one might expect from a theory that aims to enumerate a set of necessary conditions of property but is unable to articulate those conditions, the "bundle of rights" theory has been roundly criticized by the academy.[131] Pointing to this failure, commentators see the theory's potentially appealing flexibility as a fatally unsatisfying malleability, and condemn the theory for being merely conclusory and for being more prescriptive than descriptive,[132] which collapses the theory into an instrumentalist tool.[133] Nevertheless, the theory retains popular appeal among the judiciary,[134] arguably due to its more utilitarian underpinnings, and thus continues to be an important force in the development of property theory.

> transmissibility and absence of term, the prohibition of harmful use, liability to execution, and the incident of residuarity: this makes eleven leading incidents.

A.M. Honoré, *Ownership*, *in* OXFORD ESSAYS IN JURISPRUDENCE 107, 113 (A.G. Guest ed., 1961). For a detailed examination of these incidents, see Penner, *supra* note 32, at 754–67. *See also* Bell & Parchomovsky, *supra* note 1, at 546.

130. Many scholars continue to work toward this goal. Thomas Merrill and Henry Smith have espoused the "numerus clausus" theory, which favors standardizing the types of transferable property interests to increase the fungibility of property rights. *See* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1 (2000); Merrill, *Right to Exclude*, *supra* note 30, at 734–39 (describing the "single-variable essentialism" and "multiple-variable essentialism" versions of the conceptual theory, which aim to enumerate essential factors of "property").

Other modern theorists have abandoned that particular quest in favor of a more contextual and even more conceptual approach under which the type and number of rights necessary to qualify as "property" are not fixed, and vary depending upon the circumstances. *See, e.g.*, Penner, *supra* note 32, at 722–23 (defining a "conceptual" version of the bundle-of-rights theory under which "different combinations of the bundle in different circumstances may all count as 'property' and no particular right or set of rights in the bundle is determinative"); *see also* Barry Hoffmaster, *Between the Sacred and the Profane: Bodies, Property, and Patents in the* Moore *Case*, 7 INTELL. PROP. J. 115, 128–30 (1992); Merrill, *Right to Exclude*, *supra* note 30, at 734–39 (dubbing this approach the "nominalism" approach to the conceptual theory); Jeremy Waldron, *What is Private Property?*, 5 OXFORD J. LEGAL STUD. 313 (1985).

131. *See, e.g.*, BRUCE A. ACKERMAN, PRIVATE PROPERTY AND THE CONSTITUTION 113–16 (1978).

132. *See* Bell & Parchomovsky, *supra* note 1, at 545–46 ("[T]he bundle of rights theory transformed property into an almost infinitely malleable concept, amenable to numerous permutations, and subject to ad hoc decisionmaking.") (emphasis removed); Penner, *supra* note 32, at 771 ("'[P]roperty' is only used prescriptively, to lay down a rule or state a result in a case for the parties; it is never used descriptively, to characterize a normative situation simply because of the features it manifests.") (emphasis removed).

133. *See* Penner, *supra* note 32, at 772 ("[T]he conclusory nature of the concept of property essentially grants one license to adopt a particular instrumental perspective when deciding to apply the concept, without however feeling the need to identify quite what the instrument is.").

134. *See supra* note 126.

Intellectual property rights easily qualify as property under this theory. Because, under the prevailing Hohfeldian view, property is a collection of incorporeal in personam rights against others, the incorporeal nature of intellectual property is irrelevant.[135] The sole question is whether the statutorily created in personam rights attendant to patents, copyrights, trademarks and trade secrets meet the minimum criteria. Commentators have quite rightly concluded that they do because these species of intellectual property all entail the rights to use, exclude, and transfer the property.[136]

2. The Natural Rights Approach

The natural rights theory of property perches atop the philosophical works of John Locke.[137] According to Locke, people own their own persons and the fruits of their labors; consequently, whatever those individuals create thereby becomes their personal "property,"[138] even within the State of Nature and prior to the formation of Society.[139] Thus, under the natural rights approach, any thing created by an individual's labor belongs to that individual.

Although it does not enjoy the same widespread acceptance as the conceptual theory of property,[140] the natural rights theory has flavored to some degree the judicial evolution of the concept of property.[141] As the

135. Hohfeld, *supra* note 127, at 30 ("[A]ll legal interests are 'incorporeal'—consisting, as they do, of more or less limited aggregates of abstract legal relations.") (emphasis removed).

136. *See* Bell & Parchomovsky, *supra* note 1, at 587 ("The most minimal formulation, and possibly most widely accepted, enumerates the rights to use, exclude, and transfer as the constitutive elements of property."). *Accord* Carrier, *supra* note 6, at 52 ("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."). The federal statutes authorizing intellectual property meet these definitions. *See, e.g.*, Gordon, *supra* note 22, at 1366 (noting how copyright law "constitutes a simultaneous award of Hohfeldian rights, privileges, and powers over the enumerated uses").

137. *See* JOHN LOCKE, THE SECOND TREATISE OF GOVERNMENT 16–30 (Thomas P. Peardon ed., Liberal Arts Press 1952) (1690).

138. *Id.* at 17; *accord* Bell & Parchomovsky, *supra* note 1, at 536 (Locke "suggested that labor was the source of added value and that adding labor to natural resources, including the labor of finding the resource, created property naturally belonging to the laborer").

139. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 461 ("Locke believed that property is a right in the state of nature.").

140. *Cf. supra* note 126.

141. In *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986 (1984), for example, the Court held that a trade secret qualified as "property" within the meaning of the Fifth Amendment's Takings Clause. In reaching this holding, the Court observed that "[The] general perception of trade secrets as property is consonant with a notion of 'property' that extends beyond land and tangible goods and includes the products of an individual's 'labour and invention.'" *Id.* at 1002–03. The Court quoted both Locke (as well as Blackstone) in support of its reasoning. *Id.*

Court's reliance on this theory with respect to trade secrets indicates,[142] the Lockean natural rights theory is particularly well suited as a justification for self-generated property, which by definition includes intellectual property. Thus, it is not surprising that all forms of intellectual property would appear to qualify as "property" under this approach.[143]

3. The Moral Desert Approach

The moral desert approach is a close cousin to the natural rights approach. But whereas natural rights theory posits that an item or idea is transformed into "property" as a consequence of its creator's outpouring of labor, moral desert theorists such as Lysander Spooner[144] and Ayn Rand[145] subscribe to the view that the creator of such property possesses an additional moral claim to that property as a consequence of the author's efforts.[146] In particular, the author has the moral right to protect the integrity of the work as well as the right to assure its proper attribution.[147]

This theory has traditionally occupied a secondary role in property theory. The judiciary has cited it as a supplemental justification for the recognition of property rights,[148] although Congress did in 1990 fashion a new cause of action for copyright holders against persons who denigrate the integrity of a copyrighted work or fail to properly attribute authorship of such a work.[149] The theory is not without its flaws, however. Among others, the theory's premise of entitlement ignores that not all of the

142. *See id.*

143. *See* Carrier, *supra* note 6, at 32.

144. *See* 3 LYSANDER SPOONER, *The Law of Intellectual Property; or Any Essay on the Right of Authors and Inventors to a Perpetual Property in Their Ideas*, *in* THE COLLECTED WORKS OF LYSANDER SPOONER 7 (C. Shively ed., 1971).

145. *See* AYN RAND, CAPITALISM: THE UNKNOWN IDEAL (1967).

146. *See generally* Palmer, *supra* note 6, at 821–27 (describing the evolution of the moral desert theory); Erin E. Gallagher, Note, *On the Fair Use Fence Between Derivative Works and Allegedly Infringing Creations: A Proposal for a Middle Ground*, 80 NOTRE DAME L. REV. 759, 771–77 (2005); Hardin, *supra* note 11, at 668 ("A desert theory . . . merely says people deserve what they get . . . .").

147. Carrier, *supra* note 6, at 31–32 ("The 'moral rights' approach protects authors' rights to the integrity, attribution, and disclosure of their works . . . ."); Gallagher, *supra* note 146, at 772–73.

148. *See* United States v. Paramount Pictures, Inc., 334 U.S. 131, 158 (1948) ("The copyright law, like the patent statutes, makes reward to the owner a secondary consideration."). *See generally* Gordon, *supra* note 22, at 1437 ("[T]he Supreme Court has consistently stressed copyright's economic role, stating that reward to the author is a 'secondary consideration' in a system aimed primarily at increasing social welfare."); *see id.* at 1437 n.404 (collecting other, similar Supreme Court pronouncements).

149. *See* 17 U.S.C. § 106A (2000). This provision was enacted as part of the Judicial Improvements Act of 1990. *See* Judicial Improvements Act of 1990, Pub. L. No. 101-650, Title VI, § 603(a), 104 Stat. 5089. Interference with these rights does not form a basis for criminal prosecution, however. *See* 17 U.S.C. § 506(f); 18 U.S.C. § 2319.

creative endeavor is due solely to the *creator's* efforts;[150] the theory constitutes an infringement on the liberty of others because it constrains their use of the creator's property;[151] the theory's moral underpinnings are too ambiguous to provide any reliable definition of property and its attendant rights;[152] and, in a more utilitarian vein, the theory justifies only the protection of a "reputational capital" rather than economically based damages.[153] Whatever the popularity of the moral desert theory, intellectual property qualifies as property under it because, as a form of property created from one's very mind, it is an intimately personal form of property that the creators have a moral right to claim as their own.[154]

4. The Personality Approach[155]

According to this theory, pioneered by Immanuel Kant[156] and G.W.F. Hegel,[157] property serves an abstract but ultimately functional goal—to distinguish one person from another.[158] In other words, people do not own

150. Richard A. Epstein, *Liberty Versus Property? Cracks in the Foundation of Copyright Law*, 42 SAN DIEGO L. REV. 1, 8 (2005) [hereinafter Epstein, *Liberty*] ("[N]o one can make out a claim that one hundred percent of any development is due to individual effort.").

151. *See* Palmer, *supra* note 6, at 828–31.

152. Palmer, *supra* note 6, at 834 ("[D]esert has no principle, that is, no readily available and intersubjectively ascertainable measure. Such an inherently subjective standard provides a poor foundation for the abstract and general rules that guide conduct in a great society.").

153. Robert J. Sherman, Note, *The Visual Artists Rights Act of 1990: American Artists Burned Again*, 17 CARDOZO L. REV. 373, 373 (1995) ("Moral rights are personal rights that vest in the author of a creative work and exist independently of economic rights."). As a consequence, "[c]opyright holders who seek to enforce their claims under a moral rights framework must also realize a moral rights conception does not consider economic harm as a measure of damages. Instead, a kind of reputational capital is at stake when rights of integrity and attribution are compromised." Gallagher, *supra* note 146, at 777.

154. *See* Gallagher, *supra* note 146, at 760–77 (assuming moral desert's applicability to intellectual property); Palmer, *supra* note 6, at 819–20 (same).

155. Scholars disagree on how the personality theory "fits" with other property theories. Some treat it as having natural law origins, *see* Bell & Parchomovsky, *supra* note 1, at 542, while others view it as more independent and not beholden to moral or instrumental goals, *see* Schroeder, *Unnatural Rights*, *supra* note 6, at 453–54 (arguing against an instrumental justification for personality theory); Jeanne Lorraine Schroeder, *Virgin Territory: Margaret Radin's Imagery of Personal Property as the Inviolate Feminine Body*, 79 MINN. L. REV. 55, 124 n.263 (1994) ("Hegel's property theory is intensely anti-naturalistic.").

156. Kant drew a similar distinction between personal authorship and other, less personal creations. *See* Immanuel Kant, *Von die Unrechtsmässigkeit des Büchernachdrucks*, *in* 2 COPYRIGHT AND PATENTS FOR INVENTIONS 580 (R. A. Macfie ed., 1883).

157. *See* G.W.F. HEGEL, PHILOSOPHY OF RIGHT (S.W. Dyde trans., Batouche Books 2001) (1896).

158. At least in this respect, personality theory has this instrumental goal as its object. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 469 (noting how, according to Hegel, "property is a regime created to achieve a goal—the creation of subjectivity through intersubjective recognition").

property for the sake of its use or enjoyment; rather, a person's ownership of a particular piece of property is a means of differentiating that person from everyone else.[159] Property ownership is simply owners' means of intersubjectively communicating their distinct personality to others.[160] To achieve this function, property must possess a certain "thingness"—that is, it must be separable from the people themselves; otherwise, it would provide no basis for distinguishing one person from another.[161]

Intellectual property surely qualifies as "property" under personality theory. In fact, intellectual property is arguably the archetypical type of object to be used to distinguish one individual from another because artistic creations, inventions and other mentally created innovations are intimately tied to the individual. Intellectual property as currently defined also contains the requisite "thingness" because it is legally cognizable only if it has an existence outside the creator's mind.[162] Consequently, intellectual property is "property" under this approach as well.[163]

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159. HEGEL, *supra* note 157, at 105. *Accord* Palmer, *supra* note 6, at 838 ("Personality does not simply require external objects for its development. Its development is its objectification through externalization of its will."); Schroeder, *Unnatural Rights*, *supra* note 6, at 464 ("To Hegel, property is the starting point for the creation of subjectivity because it is the most primitive way that abstract individuals can take on the particularity necessary for recognition by other persons.").

Margaret Jean Radin has built upon this Hegelian foundation, arguing that property falls into two categories—fungible and personal, with the former being held for functional purposes and the latter being held in order to distinguish one's personality. *See* Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849 (1987); Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982) [hereinafter Radin, *Personhood*]. Radin argues that property law should afford greater protection to personal property concerned with communicating one's personality. Radin, *Personhood*, *supra* at 986–88.

160. Schroeder describes the process of self-distinguishing: "[The individual] does this by entering into object relationships not for the sake of objects, but as a means of mediating and achieving intersubjective relationships." Schroeder, *Unnatural Rights*, *supra* note 6, at 464. Of course, the "personality" conferred by property ownership is merely a vessel—to be filled by morals and ethics. Hegel, *supra* note 157, at 59. *See also* Schroeder, *Unnatural Rights*, *supra* note 6, at 479–80.

161. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 466 ("Although Hegel insists that property is intersubjective in nature, he also insists that it always involves objects.").

162. For example, copyright protection only attaches once the expression of an idea has been "fixed." *See supra* note 55. Patented inventions must be reduced to writing before being granted any protection by the U.S. Patent and Trademark Office. *See supra* text accompanying notes 37–42. Trademark protection typically attaches to tangible goods or articulable services. *See supra* text accompanying notes 91–94. Trade secrets must possess independent economic value, which ostensibly requires that they be articulated and therefore distinct from their creator. *See supra* text accompanying note 113.

163. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 465 ("The very abstraction of intangibles enables them to more adequately serve as 'objects' [within the meaning of Hegel's theory] than tangibles."). *Cf.* Sterk, *supra* note 16, at 1240–41 (acknowledging that copyrighted works reflect a person's personality).

5. The Instrumental Approach

Rather than seeking an extra-legal framework for defining property (as do the natural rights, desert, and personality theories) or developing a framework inductively by searching for commonalities among those items already classified as "property" (as does the conceptual approach), the instrumental or utilitarian approach views "property" solely as a means to an end.[164] Its definition of "property" is tautological: "Property" is whatever we say it is in order to achieve whatever instrumental goals we have defined.[165]

Intellectual property rests on an instrumental foundation, deriving both its status as property and its contours as a means of achieving public policy ends. The Constitution grants Congress the authority to legislate in order to "promote the Progress of Science and useful Arts,"[166] and Congress has positively enacted the laws recognizing intellectual property to achieve those (and other related) ends.[167] These positive laws entail costs, however, and Congress has had to grapple with competing public policy concerns.

As discussed above, each type of intellectual property—patents, copyrights, trademarks, and trade secrets—is a legislatively granted monopoly, designed to simulate scarcity and hence create value.[168] But monopolies have a downside, as they create economic rents at the expense of competition.[169] Given this dynamic, defining intellectual property too

164. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 453 ("[U]tilitarianism disavows natural rights and recognizes property only contingently insofar as it furthers society's goals of utility or wealth maximization.").

165. Jeremy Bentham was one of the progenitors of this approach. *See generally* JEREMY BENTHAM, THE THEORY OF LEGISLATION (C.K. Ogden ed., 1931) (1882); 2 JEREMY BENTHAM, *Anarchical Fallacies*, *in* THE WORKS OF JEREMY BENTHAM (J. Bowring ed., 1843).

166. U.S. CONST. art. I, § 8, cl. 8. *See also* Gordon, *supra* note 22, at 1348 n.21 ("The constitutional clause is usually taken to indicate that the primary goal of copyright and patent law is to provide incentives . . . .").

167. Carrier, *supra* note 6, at 32 ("The utilitarian justification of providing incentives to innovate, however, is the predominant justification for [intellectual property], one that is consistent with the Constitution, that the courts have recognized, and that academic literature has tested.").

168. *See supra* text accompanying notes 27–30. *See also* Hardin, *supra* note 11, at 659 ("[E]nforcing rights to intellectual property is an effort to mimic scarcity where there is none.") (citation omitted).

169. Geraldine Szott Moohr, *The Problematic Role of Criminal Law in Regulating Use of Information: The Case of the Economic Espionage Act*, 80 N.C. L. REV. 853, 890–91 (2002) [hereinafter Moohr, *Problematic Role*] ("Creating a monopoly is not usually considered a constructive way to support competition; monopolists restrain trade when they keep others out of the market and charge higher than necessary prices for their products."); Saperstein, *supra* note 15, at 1483–84 ("An economic rent is . . . payment greater than the opportunity cost . . . . [A] firm making excess profits is earning economic rent."). Economic rent is economically problematic because "rent seeking results in the sub-optimal allocation of resources." *Id.* at 1491.

narrowly risks squelching creators' incentive to create for fear of "free riders" exploiting their work;[170] defining it too broadly risks granting too expansive a monopoly that financially benefits the creators at the expense of the public who would otherwise benefit from the free availability of the new idea, creative expression, or invention.[171] Because the balance of competing public policy interests varies for each specific type of intellectual property,[172] I now turn to the instrumental concerns that underlie each of the four major intellectual property rights protected by federal law, and how those entitlements were structured to address those concerns.[173]

a. Patents

Patent law reflects the compromise between conferring a time-limited monopoly for approved inventions as an incentive to invent and publishing the substance of the new inventions, even during the monopoly period, so the public may build upon those inventions.[174] On the incentive side, patent protection serves to stimulate investment in research and development and to encourage early disclosure of the invention. Further, it encourages earlier disclosure of an invention by awarding the patent to the inventor who registers the invention first.[175] To bolster these incentives, the patent monopoly grants inventors the exclusive use of their invention for a period of time, even against those who develop the invention on a parallel track or

170. *See* Carrier, *supra* note 6, at 82 ("Providing incentives for development is the primary goal of [intellectual property] and a critical goal of property."); Gordon, *supra* note 22, at 1387 ("[C]opyright encourages productive behavior by giving creators a share in the benefits they generate.").

171. *See* Bell & Parchomovsky, *supra* note 1, at 563 (intellectual property law involves the need to "balance[] the utility of incentives for innovation against the costs produced by monopoly-induced deadweight loss"); Netanel, *supra* note 26, at 336 (noting "the deadweight loss and dangers of private censorship that are so intrinsic to the copyright monopoly"); Saperstein, *supra* note 15, at 1489–90 (identifying three "deadweight losses" of monopolies).

172. This context-specificity is similar to the point made by Michael W. Carroll in his recent article. *See* Carroll, *supra* note 23.

173. I take no position on the wisdom of how these rights are currently balanced. Many scholars have criticized Congress for extending intellectual property rights too far; their criticisms are at times well-taken. *See, e.g.*, Gregg Duffey, Comment, *Trademark Dilution Under the Federal Trademark Dilution Act of 1995: You've Come a Long Way Baby—Too Far, Maybe?*, 39 S. TEX. L. REV. 133 (1997); Dennis S. Karjala, *Harry Potter, Tanya Grotter, and the Copyright Derivative Work*, 38 ARIZ. ST. L.J. 17, 38–39 (2006); Jacqueline D. Lipton, *Beyond Cybersquatting: Taking Domain Name Disputes Past Trademark Policy*, 40 WAKE FOREST L. REV. 1361, 1397–98 (2005); Sterk, *supra* note 16, at 1197; John B. Clark, Note, *Copyright Law and the Digital Millennium Copyright Act: Do the Penalties Fit the Crime?*, 32 NEW ENG. J. ON CRIM. & CIV. CONFINEMENT 373 (2006).

174. Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 161 (1989) (discussing the "incentives created by federal patent monopoly").

175. Blair & Cotter, *supra* note 40, at 1597.

engage in reverse engineering.[176] Several contours of patent law favor the public interest by stimulating public disclosure and use of new inventions: its limited duration, the first-to-file rule, and the requirement of public disclosure.[177]

b. Copyrights

In the broadest sense, copyright law rests on the competing values of providing the creator an incentive to create while ensuring that the public has access to the creator's work.[178] The justification for the copyright monopoly can rest on one of several theories. At the far extreme is the neoclassical theory, which favors a broad monopoly aimed at stimulating a robust market for the exchange of copyrighted works.[179] In the middle—and by far the most widely accepted—is the economic incentive theory, which seeks to provide a monopoly that is carefully calibrated to provide just enough of a monopoly to constitute a sufficient monetary incentive to create.[180] At the other extreme is the minimalist theory, which only grudgingly tolerates a monopoly and which demands a more particularized

176. *See supra* text accompanying note 45.

177. *See supra* text accompanying notes 42–45.

178. *See* Gordon, *supra* note 22, at 1387 ("[C]opyright encourages productive behavior by giving creators a share in the benefits they generate."); Lemley & Reese, *supra* note 19, at 1351 ("[C]opyright owners have never been able to prevent all infringement. All they need to do is reduce infringement enough that they can make a return on their investment."); Loren, *supra* note 17, at 893 ("Competing social policies underlie the scheme of copyright. One policy favors wide dissemination of new ideas and new forms of expression while the other policy encourages the production of new works by providing the economic incentive of a monopoly to ensure that creators are rewarded for their endeavors."); Moohr, *Defining*, *supra* note 16, at 789 (noting "inherent tension" between the "two-fold purpose" of copyright: "to encourage authors to create expressive material and to provide public access to that material"); Netanel, *supra* note 26, at 285 ("Copyright law strikes a precarious balance. To encourage authors to create and disseminate original expression, it accords them a bundle of proprietary rights in their works. But to promote public education and creative exchange, it invites audiences and subsequent authors to use existing works in every conceivable manner that falls outside the province of the copyright owner's exclusive rights.").

179. *See* Netanel, *supra* note 26, at 309. As expected, the neoclassical theory, in order to make all fixed ideas subject to ownership, favors a broad copyright monopoly; generous definition of the incidents of copyright protection; strong exclusivity rights to protect that ownership; and broad transferability rights. *Id.* at 317–22. In this sense, the neoclassical approach evinces a legal marginalist approach, leaving most conflicts to the market. *Id.* at 321.

180. Stewart E. Sterk described this approach well: "[F]rom an efficiency standpoint, the optimal copyright system would not seek to maximize the number of works created but, in recognition of the costs of copyright, would withdraw protection even when marginally more protection would result in a marginal increase in creative activity." Sterk, *supra* note 16, at 1209. *Accord* Netanel, *supra* note 26, at 368 ("The incentive approach tends to look critically at copyright's expansion, questioning whether greater protection is necessary to provide an economic incentive for the production of creative works."). This is because "[i]t costs more to create a work than it does to imitate someone else's work, and so, without some sort of control over imitation, creators will not have enough incentive to create." Lemley & Reese, *supra* note 19, at 1373.

showing that each contour of the monopoly is necessary to ensure incentives.[181] The commonality of these theories is the desire to provide economic incentives to create. These concerns animated Congress to create the copyright monopoly in the first place, and then to expand it—both in terms of duration and scope, and into the realm of criminal sanctions as well.[182]

Weighing against these concerns are the countervailing considerations encouraging the earliest possible entry of copyrighted works into the public domain. The availability of copyrighted works is important because it enhances the discourse of society.[183] A more fulsome public domain enables prior works to serve as the building blocks for other ideas and to play an important educational role.[184] Copyrighted works can also reinforce the democratic nature of our society, which is premised (as the First Amendment indicates) on the need for robust debate and the exchange of ideas.[185] The justifications on this side of the balance manifest themselves in several ways. Copyright law encourages an author's voluntary disclosure of a copyrighted work by premising the ability of bring lawsuits for damages on first registering the work (and thus disclosing it to the Library of Congress). The fair use doctrine also permits a portion of copyrighted works to be used by others for noncommercial, educational, and parodying purposes, and Congress has statutorily mandated compulsory licenses in certain situations where copyright owners might otherwise stymie the development of new creative expressions or means of distributing such expressions.[186]

c. Trademarks

Unlike patent and copyright, traditional trademark law confers a

181. Under this theory, Congress would "withhold copyright protection for . . . expression absent convincing proof that protection is required to induce its production and dissemination." Netanel, *supra* note 26, at 338.

182. *See* discussion *supra* Part II.B.

183. *See, e.g.*, Richard A. Epstein, *The Creators Own Ideas*, TECH. REVIEW, June 2005, at 56, 59 [hereinafter Epstein, *Ideas*] ("[C]opyright . . . fosters huge positive contributions to culture . . . ."); Moohr, *Defining*, *supra* note 16, at 738 ("The ultimate aim of copyright in the United States, as stated in the Constitution, is the promotion of knowledge and learning."); Van Houweling, *supra* note 20, at 1546 (noting the copyright "principle of broad distribution of expressive opportunities").

184. *See* Netanel, *supra* note 26, at 285.

185. Netanel, *supra* note 26, at 291, 341–58. Netanel argues that a democratic society, which relies upon a discourse of ideas, also requires some governmental copyright protection in order to assure that the dissemination of ideas is not controlled by private individuals who might stamp out expressive diversity. *See id.* at 345, 358.

186. *See supra* text accompanying notes 62–64.

monopoly—not to encourage more creativity[187]—but to benefit and protect a broader third party, namely, consumers. By conferring a monopoly on the symbols and words that come to be identified in the public's mind with certain goods and services, trademark law aids consumers in one of two ways. First, trademark facilitates an efficient marketplace by providing consumers information (that is, a brand name) that acts as a proxy for distinguishing seemingly similar products from one another and that protects against unfair competition.[188] Second, trademark encourages the producer of the goods or services to engage in quality control as a means of maintaining the good reputation associated with the trademark.[189] This quality control, in turn, translates into an improvement in public health and safety because producers want to ensure that the consuming public is not harmed by their products.

Trademark *dilution* law, while necessarily related to trademark law, is more like patent and copyright insofar as it is directed more toward protecting the owner's interest in the mark itself rather than conferring positive externalities on third-party consumers.[190] As noted above, trademark dilution law protects the owner's trademark from misuse by others, even in areas outside the scope of the registered mark.[191] Although, in some respects, it continues to protect consumers by guarding against conduct by infringers that might tarnish the mark or blur it with others (thereby eliminating the benefits gained from the information that a well-known trademark otherwise conveys to consumers),[192] dilution law requires no showing of consumer confusion and is accordingly more concerned with protecting the mark as an item of "property" for the mark

187. Moseley v. V Secret Catalogue, Inc., 537 U.S. 418, 428 (2003) ("Traditional trademark infringement law is a part of the broader law of unfair competition . . . ."); Carrier, *supra* note 6, at 42 ("In trademark law . . . there is no need to stimulate the creation of more marks.").

188. *See* Blair & Cotter, *supra* note 40, at 1611 (noting that trademarks "lower search costs by allowing consumers to distinguish between products that differ in quality but that, in the absence of brand names, would be difficult or impossible to distinguish at the point of purchase"); Long, *supra* note 105, at 1034 ("Classical trademark law is based on the proposition that consumers rely on a particular mark to identify a product possessing a particular mix of attributes. On this view, a trademark is a proxy for a set of product attributes."). *Cf.* Carrier, *supra* note 6, at 42 ("[T]he purpose of trademark law is to prevent customer confusion . . . .").

189. *See* Blair & Cotter, *supra* note 40, at 1612; Carrier, *supra* note 6, at 19–20; Coblenz, *supra* note 113, at 276.

190. *See* Long, *supra* note 105, at 1034 ("By contrast [to traditional trademark law], dilution law is producer-focused rather than consumer-focused . . . .").

191. *See supra* text accompanying notes 102–05.

192. Long, *supra* note 105, at 1058 ("Blurring [or using a mark outside of its intended use] . . . can harm consumers by increasing search costs because it increases the cognitive costs to consumers of identifying the context in which a mark is used.").

owner's benefit.

d. Trade Secrets

A trade secret is, in many respects, the temporal predecessor to a patented invention; it is a new innovation, invention or product, but one that the inventor has yet to present to the U.S. Patent and Trademark Office for a patent.[193] The instrumental justifications for trade secret law are drawn against this backdrop. On the one hand, the policy that justifies patent protection—that is, the need to provide financial incentives to encourage inventors to invent items to use in the competitive marketplace and to discourage "free riders"—similarly animates the need for *some* sort of protection for trade secrets, which are also inventions of a sort.[194] That is what has prompted legislative bodies to confer legal protection upon trade secrets in the first place.[195] On the other hand, trade secrets are by definition "secret" and thus—unlike patented inventions—do not make any contribution to the collective knowledge of society. Thus, there is a corresponding policy to encourage the owners of trade secrets to ultimately seek a patent or copyright and therefore share their innovations. Consequently, legislatures have defined "trade secrets" narrowly, refusing to extend protection when another inventor independently makes the same creation or reverse engineers it from the publicly sold product incorporating the trade secret;[196] patents, by contrast, protect against both circumstances.[197] The secrecy of trade secrets has bred a collateral set of utilitarian considerations, namely, the function of trade secrets protection as a means of ensuring rules of fair competition in the marketplace[198] while

193. Indeed, as noted above, secrecy is the very essence of a "trade secret." Chatterjee, *supra* note 26, at 860 ("'Secrecy' is . . . a core characteristic of trade secret law . . . ."). *Cf.* Cotter, *supra* note 45, at 583 ("Unlike a patentee, however, the owner of a trade secret cannot exclude one who independently invents [the trade secret] . . . .").

194. Chatterjee, *supra* note 26, at 861 ("The secrecy element protects trade secrets from 'free riders.' . . . Free riders create disincentives to investment in new resources by freely utilizing information which another has expended considerable resources to create."). *See also* Blair & Cotter, *supra* note 40, at 1598 (noting function of trade secret protection as granting a "competitive advantage"); Epstein, *Ideas*, *supra* note 183, at 59 ("Protecting trade secrets ensure that original creators are rewarded for their work."); Moohr, *Problematic Role*, *supra* note 169, at 886 (noting instrumental goal of "encourag[ing] the creation of innovative and creative products").

195. *See* discussion *supra* Part II.D.

196. *See supra* text accompanying notes 113–15. This limitation replaces the temporal limitation of patents. *See* Chatterjee, *supra* note 26, at 861–62 ("Unlike copyright and patent law, trade secret law does not impose a fixed term of protection. Rather, the ability to develop independently or reverse-engineer is the controlling factor.").

197. *See supra* text accompanying note 45.

198. Moohr, *Problematic Role*, *supra* note 169, at 889 (commenting on the "commercial morality" aspects of trade secrets law, namely that it aims to "maintain[] a high standard of commercial morality [as] a means to ensure fair competition").

not stifling employee mobility that might suffer if employee movement invariably resulted in litigation over whether the employee's previously acquired knowledge constituted a "trade secret."[199] In the end, trade secret law reflects a compromise between fostering incentives to create with the competing desire to encourage disclosure and to ensure mobility of employees in the marketplace.

6. The Law and Economics/Entitlement Approach

In a seminal 1972 article,[200] Guido Calabresi and A. Douglas Melamed transplanted the fledgling law-and-economics movement into the realm of property, and, in so doing, established a new and influential approach to evaluate the utilitarian efficacy of property law.[201] Rather than seeking to classify or define the term "property," Calabresi and Melamed introduced the concept of "entitlements"[202] and, most particularly, examined the societal rules that govern how entitlements—which are undefined—are initially allocated and how they are subsequently protected.[203]

The goal of economic efficiency drives this model, and, in particular, the economic theory developed by Ronald Coase.[204] In Coasean economic theory, the relevant unit of measure is the transaction,[205] and the paramount consideration as to whether any particular transaction will occur is the

199. Chatterjee, *supra* note 26, at 887 ("Trade secret protection inherently burdens employment relationships."); Moohr, *Problematic Role*, *supra* note 169, at 903–08. *See also id.* at 908 ("[E]mployee mobility can reduce monopoly power or the possibility of such power . . . . Competition is enhanced when employees are free to move . . . .").

200. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV 1089 (1972).

201. *See* Smith, *Property Rules*, *supra* note 127, at 1720 ("Most theorists have built on the framework of liability rules and property rules proposed by Guido Calabresi and A. Douglas Melamed . . . ."). For a sampling of articles applying their model, see Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027 (1995); Blair & Cotter, *supra* note 40; Louis Kaplow & Steven Shavell, Comment, *Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley*, 105 YALE L.J. 221 (1995); James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440 (1995); Merges, *Bargaining Breakdown*, *supra* note 45; Merges, *Contracting*, *supra* note 16; Merges, *Of Property*, *supra* note 45.

202. Bell & Parchomovsky, *supra* note 1, at 548 (observing that Calabresi and Melamed introduced the term "entitlement" rather than relying on the traditional notion of "property").

203. Calabresi & Melamed, *supra* note 200, at 1090–93.

204. *See* R. H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

205. Merges, *Contracting*, *supra* note 16, at 1361 ("[T]he transaction [is] the standard unit of economic analysis.") (emphasis removed). *See generally* OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985).

presence and extent of any transaction costs.[206] Transaction costs reflect the costs attendant to a transaction, such as the costs of obtaining accurate information about the value of the entitlement or the costs of complying with relevant laws governing the transaction.[207] According to Coasean theory, in a fictitious world where transaction costs are zero, the question of initial allocation of entitlements (the first question posed by Calabresi and Melamed) becomes irrelevant because individuals will on their own engage in transactions that maximize their own individual wealth;[208] this perfectly efficient outcome is known as "Pareto optimality" and is a major goal of entitlement theory.[209] Of course, the real world *always* has transaction costs,[210] so Pareto optimality is an aspiration of entitlement theory. Consequently, transaction costs in large measure dictate who will end up with an entitlement—whether by initial allocation or through subsequent transactions.[211]

Whether any subsequent transactions occur is dependent upon the type of rule that protects entitlements. Entitlement theory posits the existence of three possible rules to govern transactions in entitlements (and the remedies attendant to violations of those rules): property rules, liability rules, and inalienability rules.[212] A property rule facilitates voluntary, market-based transactions between parties.[213] Property rules provide entitlement holders with the legal mechanisms to protect against extra-market takings—namely, the ability to seek injunctive[214] and compensatory relief from

206. *See* Merges, *Of Property*, *supra* note 45, at 2655 ("Ever since Calabresi and Melamed, transaction costs have dominated the choice of proper entitlement rule . . . .").

207. *See, e.g.*, Brendan McNallen, *Fixing the Leaks in Brazil's Water Law: Encouraging Sound Private Sector Participation Through Legal and Regulatory Reform*, 9 GONZ. J. INT'L L. 147, 156 (2006) ("While a pervasive definition does not exist, transaction costs generally refer to the costs of specifying, monitoring, enforcing, and trading property rights."). *Accord* Calabresi & Melamed, *supra* note 200, at 1096–97; Merges, *Of Property*, *supra* note 45, at 2655.

208. Merges, *Contracting*, *supra* note 16, at 1300 ("In the absence of transaction costs, it is irrelevant who holds a right initially; parties will bargain to an efficient outcome."); Merges, *Of Property*, *supra* note 45, at 2656 ("[I]n a world with zero transaction costs, initial rights allocations are unimportant; they will be transferred to their highest-value use through private bargains.").

209. Calabresi & Melamed, *supra* note 200, at 1094.

210. Calabresi & Melamed, *supra* note 200, at 1096–97 (noting that every transaction has transaction costs because "markets do not work perfectly").

211. Merges, *Of Property*, *supra* note 45, at 2664 ("Coase's point was that transaction costs determine where rights should reside.").

212. Calabresi & Melamed, *supra* note 200, at 1092.

213. Calabresi & Melamed, *supra* note 200, at 1092 ("An entitlement is protected by a property rule to the extent that someone who wishes to remove the entitlement from its holder must buy it from him in a voluntary transaction in which the value of the entitlement is agreed upon by the seller.").

214. Bell & Parchomovsky, *supra* note 1, at 588 ("The term 'property rule' [is used] to denote what is essentially injunctive relief.").

nonconsensual takers, and, in certain cases, to report takings to the government for criminal prosecution.[215] Because entitlement holders have these remedies available, whether a transaction occurs and the price of the transaction are largely controlled by the holder's agreed-upon price.[216] Liability rules, by contrast, permit nonconsensual takings; under a liability rule, a person may take an entitlement without the holder's permission as long as that person pays whatever objective price a third party (usually the state)[217] has fixed for that entitlement.[218] The power of eminent domain[219] and compulsory licenses[220] are classic examples of liability rules. Liability rules necessarily rely on state intervention to fix the authorized taking price. An inalienability rule prevents *any* transactions involving the

215. Calabresi & Melamed, *supra* note 200, at 1124–27 (discussing applicability of the criminal law as a means of enforcing property rules).

216. Bell and Parchomovsky explain that:

> [P]roperty rule protection enables the entitlement holder to set the price at which the item will be used or transferred. A fortiori, it also empowers the holder to refuse to deal altogether and to keep the object. Property rule enforcement is therefore instrumental in the blocking of nonconsensual takings that may substantially deplete the value assets generate for their owners.

Bell & Parchomovsky, *supra* note 1, at 589. *See* Blair & Cotter, *supra* note 40, at 1589 n.15 (noting how a property rule "confers upon the owner of an entitlement the right to enjoin others from using the entitlement without permission"); Smith, *Property Rules*, *supra* note 127, at 1749 ("[A] property rule is designed to force a potential taker to pay what the owner asks in a consensual transaction . . . .").

217. Calabresi & Melamed, *supra* note 200, at 1092 ("[L]iability rules involve an additional stage of state intervention . . . [because] value [is] determined by some organ of the state rather than by the parties themselves.").

The state may not be the only entity charged with fixing liability rule-induced damages. Merges, relying on new institutionalism literature, has long championed the creation of "collective rights organizations," such as those existing in the music recording industry, which set prices collectively without the costs of a state-sponsored mechanism. *See* Merges, *Contracting*, *supra* note 16. Patent pools, which enable inventors to use one another's inventions for a preset royalty fee, are another example of a collective rights organization. *See* Merges, *Contracting*, *supra* note 16, at 1342–48. This approach is not without its critics, however. *See, e.g.*, Netanel, *supra* note 26, at 376 (contending that collective rights organizations are "plagued by problems of monopoly power and pricing").

218. Calabresi & Melamed, *supra* note 200, at 1092 ("Whenever someone may destroy the initial entitlement if he is willing to pay an objectively determined value for it, an entitlement is protected by a liability rule."). *See also* Blair & Cotter, *supra* note 40, at 1589 n.15; Merges, *Contracting*, *supra* note 16, at 1302; Smith, *Property Rules*, *supra* note 127, at 1720, 1747.

This valuation may occur prior to the taking (in the case of some compulsory licenses) or ex post in litigation (in the case of eminent domain). *See infra* notes 219–21.

219. Bell & Parchomovsky, *supra* note 1, at 604 ("In Calabresi-Melamedian terms, the eminent domain power enables the government to suspend the standard property rule protection that the owner enjoys and substitute it temporarily for liability rule protection."); Smith, *Property Rules*, *supra* note 127, at 1734.

220. Merges, *Contracting*, *supra* note 16, at 1377 (noting that a "classic rationale[] for a compulsory license: immediate short-term savings on transaction costs"); Merges, *Of Property*, *supra* note 45, at 2661–62 (citing copyright's compulsory licensing provisions as exceptions to the general preference for property rules); Smith, *Property Rules*, *supra* note 127, at 1747.

entitlement—consensual or not.[221]

Showing its utilitarian underpinnings, the entitlement theory entrusts societal policy makers[222] with the option of selecting which type of rule should govern a particular entitlement.[223] The primary criterion that should guide the decision as to which rule is most appropriate is economic efficiency.[224] Market-driven property rules are most likely to achieve Pareto optimality,[225] because they are better at protecting the exclusionary rights of the entitlement holder,[226] and, in theory, rest on a mutually beneficial exchange. It is not surprising, therefore, that property rules are typically the "default rule" used to protect entitlements.[227] There are situations in which the market fails, as do the property rules premised upon it—most commonly, where transaction costs are too high because it is impossible to agree upon a value for the entitlement[228] or where the subjective value the holder attaches to the entitlement is too high and the

221. *See* Calabresi & Melamed, *supra* note 200, at 1111. *See also* Merges, *Of Property*, *supra* note 45, at 2673 (defining "externalities" as "the effects of one's behavior on other's activities," which are typically overcome "only through state intervention"). This type of rule may also be used where fixing a "collective measurement that is acceptably objective and nonarbitrary" is impossible, *see* Calabresi & Melamed, *supra* note 200, at 1111, or where distributional goals favor keeping the entitlement where it was initially assigned by policy makers, *see* Calabresi & Melamed, *supra* note 200, at 1101 ("Whenever transactions to sell or buy entitlements are very expensive, such an initial entitlement decision will be nearly as effective in assuring that individuals will have the [entitlement] as would be making the entitlement inalienable.").

222. Merges, *Contracting*, *supra* note 16, at 1318 n.64 ("[I]t is a fundamental premise of our legal system that legislatures set entitlements . . . .").

223. Some scholars advocate an even more instrumental use of entitlement theory—namely, using "game theory" to set liability rule prices at the precise amount to induce information sharing and thereby encourage voluntary transactions. *See, e.g.*, Ayres & Talley, *supra* note 201; Blair & Cotter, *supra* note 40; Kaplow & Shavell, *supra* note 201; Krier & Schwab, *supra* note 201.

224. Calabresi & Melamed, *supra* note 200, at 1098–105. There are two other considerations: distributional goals (involving normative judgments about where entitlements should be allocated across society) and "other justice reasons" (entailing any other concerns apart from economic efficiency and distributional goals).

225. Calabresi & Melamed, *supra* note 200, at 1093–94 (defining the "goal" of the economic efficiency consideration as "Pareto optimality").

226. *See* Smith, *Property Rules*, *supra* note 127, at 1724 ("[E]xclusion and property rules will allow less room for opportunism on the part of potential takers of entitlements.").

227. Smith, *Property Rules*, *supra* note 127, at 1722 ("[T]he law treats property rule protection as the norm and liability rule protection as the exception . . . ."). *Accord* Blair & Cotter, *supra* note 40, at 1589; Merges, *Contracting*, *supra* note 16, at 1306 n.25.

228. Calabresi & Melamed, *supra* note 200, at 1110 ("[A] very common reason, perhaps the most common one for employing a liability rule rather than a property rule to protect an entitlement is that market valuation of the entitlement is deemed inefficient, that is, it is either unavailable or too expensive compared to a collective valuation."). *See* Bell & Parchomovsky, *supra* note 1, at 590. *Cf.* Ayres & Talley, *supra* note 201, at 1051; Merges, *Of Property*, *supra* note 45, at 2664; Smith, *Property Rules*, *supra* note 127, at 1721.

holder ends up "holding out" in an inefficient manner.[229] In these situations, liability rules are the economically efficient choice,[230] and may be crafted in such a way to further distributional goals.[231] Liability rules are not without cost, however, because the state must create a mechanism for valuing the "difficult to value" entitlement (which is itself not without cost[232]) and because some entitlement holders may resort to self-help to protect their entitlements, despite the liability rule.[233]

Although the entitlement approach sets no fixed definition for "property" or even for "entitlement," intellectual property is unquestionably protected both by property rules and liability rules. For the most part, the civil and criminal remedies available to enforce copyrights, patents, trademarks, and trade secrets are property rules. Some aspects of copyright are protected by liability rules, however, in that persons may use certain copyrighted works in predefined circumstances under a compulsory license[234] or, though it is a little more ambiguous (and hence riskier), make "fair use" of a copyrighted work without any compensation to the owner whatsoever.[235]

229. Smith, *Property Rules*, *supra* note 127, at 1733–34. This "hold out" may result from the owner's subjective and arguably idiosyncratic position that the entitlement is worth more than a more objective owner might value it. *See* Bell & Parchomovsky, *supra* note 1, at 598 ("In other words, the right to exclude defends the owner's ability to extract the full value of ownership right before departing with it."). *See also supra* note 159 (discussing Radin's theory of "personal" versus "fungible" property). By seeking an objectively fixed "damages" price, a liability rule regime ignores this subjective value. *See* Calabresi & Melamed, *supra* note 200, at 1108.

230. This prompts the necessity of determining *what* the appropriate liability-rule damages should be. In the intellectual property context, Blair and Cotter have argued that "[t]he optimal set of damages rules should preserve both the incentive structure of intellectual property law and the property-like character of intellectual property rights." Blair & Cotter, *supra* note 40, at 1590. In their view, the optimal damage is the greater of the entitlement owner's lost royalties or lost profits. Blair & Cotter, *supra* note 40, at 1590.

231. Calabresi & Melamed, *supra* note 200, at 1110 ("[O]nce a liability rule is decided upon, perhaps for efficiency reasons, it is then employed to favor distributive goals . . . .").

232. Ayres & Talley, *supra* note 201, at 1037 ("[L]iability rules induce nonconsensual taking, subsequent litigation and judicially determined prices . . . ."); Blair & Cotter, *supra* note 40, at 1639 ("[T]he cost of having a judicial or administrative tribunal accurately determine the amount of a reasonable royalty [followed a liability rule induced taking] is already quite high . . . ."); Kaplow & Shavell, *supra* note 201, at 231 ("[I]f litigation costs are sufficiently high, liability rules may yield less total welfare than property rules in the absence of bargaining.").

233. *See* Smith, *Property Rules*, *supra* note 127, at 1724 ("[O]n the owner's side, exclusion and property rules obviate the need to expend resources on wasteful self-help.").

234. Carrier, *supra* note 6, at 91 ("Copyright law also contains an array of compulsory licenses, which require payment—but not permission—for certain uses.") (emphasis removed); Smith, *Property Rules*, *supra* note 127, at 1747 (noting how compulsory licenses constitute a form of liability rule, and arguing that fixing them at the "average damages" occasioned by invasion of the copyright is too low).

235. *See supra* text accompanying notes 62–64.

B. THE DENOMINATOR OF EXCLUSION

As this exposition indicates, the six primary theories currently animating property philosophy consider intellectual property to fall within their definitions of property (or, in the case of entitlement theory, the equivalent of property). These theories have another, more basic commonality, however. Each of their definitions rests on a single attribute of "property"—the right to exclude others. Indeed, the right to exclude has been referred to as the "sine qua non" or the very "essence" of property.[236] Intellectual property rights also entail this key aspect of property,[237] thus reaffirming their status as "property." The potency of the right to exclude is not immutable, and can vary in strength and scope. Indeed, the intellectual property rights discussed in this Article fall along a spectrum in terms of their accompanying right to exclude.

1. The Right to Exclude Under the Various Theories

a. The Conceptual/Bundle of Rights Approach

As noted above, the focus of this formalistic, criterial approach to defining property is to determine—either inductively or deductively—the key attributes that define when a particular thing may be labeled "property."[238] From Blackstone through Hohfeld,[239] the right to exclude has always been one of the essential rights included in the "bundle of rights" that property owners possess.[240] There is historical precedent for its

236. Merrill, *Right to Exclude*, *supra* note 30, at 730; Penner, *supra* note 32, at 742 ("The notion that a property right is the right of exclusive use is some thing is an old one, and one still occasionally finds it discussed as if it were very much the essence of property."). *See also* Bell & Parchomovsky, *supra* note 1, at 597 ("The right to exclude others from using or entering into one's property is generally seen as one of the most important rights in property . . . ."); Gordon, *supra* note 22, at 1356 ("The right to exclude is generally agreed to be the most important of the owner's entitlements."). *Cf.* Carrier, *supra* note 6, at 28 ("The more the right to exclude is necessary, the less willing the legal system should be to limit that right.").

237. *See infra* Part III.B.2.

238. *See supra* text accompanying Part III.A.1.

239. Although Honoré did not enumerate the "right to exclude" as one of his eleven incidents, *see* Honoré, *supra* note 129, at 113, Penner has argued that Honoré's "right to possess" necessarily encompasses the right to exclude. Penner, *supra* note 32, at 754–56.

240. Blackstone wrote that "the principal right attached to property is the right to exclude 'any other individual in the universe.'" Bell & Parchomovsky, *supra* note 1, at 543–44 (quoting BLACKSTONE, *supra* note 127, at chs. 1, 3). *See* Gordon, *supra* note 22, at 1356 ("Property owners have at least three potential categories of rights worth mention: rights of exclusion, rights against harm or interference, and rights over the benefits their property yields."); Strahilevitz, *supra* note 126, at 1836 ("The various rights in the bundle, however, are not equal in terms of importance. To the contrary, American courts and commentators have deemed the 'right to exclude' foremost among the property rights . . . .").

importance,[241] as well as the functional reality that most other rights in the "bundle" are logically derived from the baseline right to exclude.[242]

b. The Natural Rights and Desert Approaches

The right to exclude others is also a critical aspect of these closely related property theories. As noted above, the Lockean natural rights theory defines "property" as the fruits of an individual's labor, and desert theory adds a moral dimension.[243] Under these approaches, the right to exclude others from such property would appear to be a necessary means of protecting the creator's right to those fruits and protecting against misattribution or damage to the integrity of a work; otherwise, "free riders" would be able to assert claims to the property despite any expenditure of their own labor or to otherwise damage the author's reputational capital.

c. The Personality Approach

Hegelian-based personality theory views property not as an end in itself, but as a means of creating "object relationships" that function to distinguish one individual from another.[244] In this fashion, property aids in the creation of distinctive personalities.[245] In light of this purpose, it is critical that the property owner be able to exclude others; without that ability, the owner would be unable to distinguish himself from others.[246]

d. The Instrumental Approach

Because the instrumental approach is necessarily context-specific, the definition of "property" under this approach is tied to the type of property at issue—intellectual property. With respect to most forms of intellectual property (that is, patents, copyrights, and trade secrets), the instrumental goal of nurturing the creation of intellectual property through the conferral of limited statutory monopolies is balanced against the negative externalities attendant to such monopolies.[247] The very essence of a

241. In particular, Merrill argued that the "usufruct"—one of the "most elementary form[s] of property right"—entailed an exclusive right to use land. Merrill, *Right to Exclude*, *supra* note 30, at 745–47. He thus concludes that "[i]t appears the first step in the evolution of property rights in land was the recognition of the right to exclude . . . ." Merrill, *Right to Exclude*, *supra* note 30, at 747.

242. Merrill, *Right to Exclude*, *supra* note 30, at 740 ("[I]f one starts with the right to exclude, it is possible to derive most of the other attributes commonly associated with property . . . .").

243. *See supra* text accompanying Parts III.A.2 and III.A.3.

244. *See supra* text accompanying Part III.A.4.

245. *See supra* text accompanying Part III.A.4.

246. *See* Schroeder, *Unnatural Rights*, *supra* note 6, at 469 ("The goal [under personality theory] is differentiation of the possessor from the non-possessor. Consequently, possession is more accurately the exclusion of others from the object identified to the owner.").

247. *See supra* text accompanying Part III.A.5.

monopoly is the right of exclusive control and the converse right to exclude others. Absent this right to exclude, the monopoly would be of little effect and the instrumental purpose of the monopoly—encouraging the creation of new works—would be largely eviscerated.[248]

The right to exclude is similarly critical in the context of traditional trademark law, which involves a different balance of policy concerns and is aimed more at increasing market knowledge and protecting public health and safety.[249] Those functions would not operate as well, however, if trademark rights were nonexclusive; the ability of a mark to distinguish one product from another would disappear, as would the manufacturer's incentive to build goodwill through quality control.

Thus, as to all forms of intellectual property protected by federal law, the right to exclude others from that property is key to the instrumental justifications for that protection.

e. The Law and Economics/Entitlement Approach

Exclusionary rights are similarly key to the entitlement approach advocated by law and economics scholars. The right to exclude is critical to maintaining this theory's tripartite scheme of property rules, liability rules, and inalienability rules. A property rule is, by definition, grounded in the right to exclude, as it authorizes judicial and other remedies against anyone who interferes with that right.[250] An inalienability rule is the absolute version of a property rule.[251] Without the right to exclude, these two types of entitlement protections would not exist; only liability rules would. Thus, the right to exclude is the crucial factor distinguishing property rules from liability rules, and is consequently important to those theorists who seek to use the distinction between those two types of rules to further instrumental and distributional goals.[252]

More modestly, the right to exclude also facilitates entitlement transactions under any rule by reducing transaction costs. Exclusionary rights are communicative, and can broadcast to others both the identity of

248. Moreover, the monopolies granted with respect to intellectual property secure exclusive *use* of the intellectual property rather than exclusive *possession*. That is because "a right against physical intrusion would not enable an intellectual property owner to control most economically significant uses of the intellectual product." Gordon, *supra* note 22, at 1387.

249. *See supra* text accompanying notes 187–90.

250. Smith, *Property Rules*, *supra* note 127, at 1727 ("[E]xclusion, property, and property rules fit together."). *See also supra* text accompanying notes 213–16.

251. *See supra* text accompanying note 221.

252. *See supra* text accompanying notes 217–34.

the owners and the scope of their ownership rights,[253] thereby reducing information costs, an important component of any transaction.

2. Intellectual Property Rights

Because the species of federally recognized intellectual property rights qualify as "property" under the six leading property theories extant in the academy today, it is hardly surprising that those rights—namely, patent, copyright, trademark, and trade secrets—depend upon the right to exclude inherent in every one of those theories.[254] But each form of intellectual property encompasses exclusionary rules of different strength.

The notion of a spectrum of exclusionary rights is hardly new, as Henry Smith and others have developed an entire nomenclature on the topic.[255] At one end of the continuum are trespass-based exclusionary rights that empower property owners to entirely or selectively exclude others from the use of their property.[256] At the other end are so-called "governance strategies" that do not exclude others, but regulate the conduct of property users with rules that communicate messages about desirable and undesirable uses of the property so that the users will "self-select."[257]

253. Smith, *Property Rules*, *supra* note 127, at 1793 ("Property is more 'exclusion-based' than other rights because, for a given resource, exclusion uses a low-cost signal for a bundle of related uses against all those lacking the owner's permission."); Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965, 981 (2004) [hereinafter Smith, *Nuisance*] ("Exclusion is a low-cost, but low-precision, method that relies on rough informational variables like boundaries to define legal entitlements."). Noting that possession (particularly of tangible items) is part and parcel with the exclusive right to control, scholars have commented on the communicative function of possession itself. *See* Bell & Parchomovsky, *supra* note 1, at 591 (commenting on the "communicative role of possession in conveying information to third parties"); Schroeder, *Unnatural Rights*, *supra* note 6, at 471 (observing that most forms of intellectual property rights rely upon a publication requirement, resulting in a "possession through marking").

254. *See* Merrill, *Right to Exclude*, *supra* note 30, at 749 ("The law with respect to intangible rights in intellectual property is, if anything, even more striking in the degree to which the property right and the right to exclude go hand-in-hand. Copyrights, patents, trademarks, and trade secrets are all recognized as intangible forms of property. *In each case, the core of the property right is the right to exclude others from interfering with or using the right in specified ways* . . . .") (emphasis added).

255. *See generally* Smith, *Nuisance*, *supra* note 253; Henry E. Smith, *Exclusion Versus Governance: Two Strategies for Delineating Property Rights*, 31 J. LEGAL STUD. 453 (2002) [hereinafter Smith, *Two Strategies*]; Strahilevitz, *supra* note 126.

256. A rule that excludes *everyone* is known as a "hermit's right," while a rule that enables the property owner to selectively admit some and exclude others is referred to as a "bouncer's right." Strahilevitz, *supra* note 126, at 1842–43. As one might expect, few property owners (other than the government) ever exercise a hermit's right. The bouncer's right is the far more common, and even entails selective access through the granting of licenses to use the property. *See* Penner, *supra* note 32, at 753 ("The right of exclusive use comprises rights to license property, and to give it away.").

257. Strahilevtiz, *supra* note 126, at 1839 ("Governance, in short, manages a resource, not through blunt access restrictions, but through sets of rules or standards that regulate the conduct of those who do

The choice between the trespass and nontrespass strategies hinges on the availability of information; the more information property owners have, the more readily they can use that information to select others using a trespass-based theory.[258]

Viewed through this prism, nearly all of the intellectual property rights rely upon trespass-based exclusionary rules of varying potency.[259] Patents have the greatest exclusionary protection.[260] Once patent owners have registered their invention with the Patent and Trademark Office, they have an enforceable right against infringement by other inventors—whether they reverse engineer the invention from the finished product or even develop it independently.[261]

Copyright holders have a slightly less potent collection of exclusionary rights.[262] Although they, like patent holders, are empowered to enjoin and seek redress for infringement,[263] the monopoly that copyright holders hold over their creations is limited in two significant respects: it does not reach "fair use" of their creations and is subject to a handful of compulsory licenses that permit certain, statutorily enumerated, nonconsensual uses of the copyrighted work in exchange for a royalty payment.[264] Indeed, much of the criticism aimed at the DMCA (and its civil and criminal penalties for circumventing copyright protection) is the concern that it renders unlawful the circumvention of protection of a copyrighted work, even when the intended use of the work would not

have access."). Governance strategies come in two flavors: "exclusionary vibes" entail rules that possible entrants onto the property must obey, while "exclusionary amenities" are assets that all entrants collectively fund. Persons who do not wish to follow the rules or to pay for the amenity opt not to enter the property. Strahilevtiz, *supra* note 126, at 1857–59.

258. Strahilevitz, *supra* note 126, at 1837 ("[I]nformation costs are often the primary factor guiding a resource owner's decision about which right to exclude he should exercise in a particular context."). *See also* Strahilevtiz, *supra* note 126, at 1869–72. This parallels the importance of information as a "transaction cost" in entitlement theory. *See* Calabresi & Melamed, *supra* note 200, at 1106–11 (noting that a primary factor in choosing between property and liability rules is the ability to engage in "market valuation," which depends upon the ready availability of information).

259. They do not go too far, however, as an overbroad exclusionary rule breeds problems of its own, including market-based harms due to an over-extensive monopoly, bottlenecks in innovation, and impoverishment of the public domain. Carrier, *supra* note 6, at 44.

260. Gordon, *supra* note 22, at 1368 ("Patent law approaches [exclusive] 'use' most expansively.").

261. *See supra* text accompanying note 45.

262. Gordon has described copyright as being in the middle "on the infringement continuum." Gordon, *supra* note 22, at 1370 ("Copyright's grant of exclusive rights thus most closely parallels landowners' 'right to exclude,' for patent law gives proprietors something more than a 'right to exclude' and trademark and trade secret law give something less.").

263. *See supra* text accompanying notes 65–74.

264. *See supra* text accompanying notes 62–64.

violate copyright law (for example, fair use).[265] Thus, these limitations on the copyright monopoly's exclusionary rights have a long and revered pedigree.

Trademark law confers less protection. In addition to requiring that the trademark be registered with the PTO and currently in use, a trademark user's right to exclude is contingent upon a showing that the infringer's misuse of the trademark was likely to result in consumer confusion.[266]

Trade secrets have the least amount of exclusionary protection, largely because the duration of legal protection accorded to trade secrets is ephemeral.[267] Once a trade secret is no longer secret, it loses all protection. Thus, if a person reverse engineers a trade secret from the publicly available product or service, or independently invents the same trade secret, the trade secret owner has no right to exclude that individual from making use of the trade secret.[268]

As the discussion in this Part indicates, intellectual property rights qualify as "property" under the leading property theories and are grounded in the right to exclude others that is critical to all of the theories. I now move from an examination of the symmetries to an explication of the dissimilarities between intellectual property and other types of property.

IV. THE DANGERS OF THEORETICAL HOMOGENEITY: A CASE STUDY

Notwithstanding its qualification as a form of "property," intellectual property is theoretically distinct from other forms of tangible property. A stark illustration of the differences has come to light in the current crisis over how to value intellectual property assets that are the object of a federal crime. The Sentencing Commission and judiciary have attempted to solve the issue by using the rules that govern the theft of tangible items, but this has left the courts deeply divided. In this Part, I explore how the differences

265. *See* Lemley & Reese, *supra* note 19, at 1388 ("[T]he threat of lawsuits or criminal prosecutions against innovators is likely to deter a significant amount of innovation, some of which would unquestionably have been legal."); Loren, *supra* note 17, at 894 ("Criminal sanctions and the threat of criminal sanctions are extremely chilling . . . ."); Moohr, *Defining*, *supra* note 16, at 802–04 (discussing the chilling effect of the DMCA on creativity, particularly with respect to individuals who build upon existing copyrighted works).

266. *See supra* text accompanying notes 96–100.

267. Moohr, *Problematic Role*, *supra* note 169, at 867–68 ("[O]ne who holds a trade secret does not have a guaranteed right to the exclusive use of the secret. . . . Thus, the interest in a trade secret is not protected against the world, but only against malefactors.").

268. *See supra* text accompanying notes 114–15. *Accord* Chatterjee, *supra* note 26, at 861–62; Cotter, *supra* note 45, at 593; Gordon, *supra* note 22, at 1370.

inherent to intellectual property dictate reliance—not on a model predicated on the theft of tangible items—but on a paradigm recognizing the unique theoretical composition of intellectual property. I lastly examine how this paradigm squares with the six property theories discussed in Part III.

A. THE HETEROGENEITY OF INTELLECTUAL PROPERTY

Despite the definitional overlap, two attributes of intellectual property distinguish such property from other forms of tangible property. Both attributes trace back to the fact that intellectual property is intangible.

First, intellectual property is inherently unique.[269] Patented inventions, copyrighted works, trademarks, and trade secrets all must be novel, distinctive or original in order to qualify for legal protection.[270] By contrast, tangible property need not be unique to have value because its *physicality* ensures that it is scarce because only one person can possess it at a time.[271] Intellectual property lacks that physicality, so its scarcity is solely a product of legislative grace—and that legislative grace is premised on novelty.

Second, intellectual property involves intangible ideas that are, as a consequence, a "public good."[272] All this label means is that intellectual property can be enjoyed without being consumed (it is "nonrivalrous") and can be enjoyed by more than one person at a time (it is "nonexclusive").[273] This is not true of tangible property, which can physically be enjoyed or consumed by only one group at a time—the person or persons possessing the property.

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269. *See, e.g.*, United States v. Wilson, 900 F.2d 1350, 1356 (9th Cir. 1990) (noting the "uniqueness of the information" at issue in that case, namely, the trade secret process for creating a particular protein); United States v. Pemberton, 904 F.2d 515, 517 (9th Cir. 1990) (describing architectural drawings as "unique" and "not fungible"); Ted Hagelin, *Competitive Advantage Valuation of Intellectual Property Assets: A New Tool for IP Managers*, 44 IDEA 79, 80 (2003) [hereinafter Hagelin, *Competitive Advantage*] ("[I]ntellectual property assets are rarely comparable."); Ted Hagelin, *A New Method to Value Intellectual Property*, 30 AIPLA Q.J. 353, 357 (2002) [hereinafter Hagelin, *New Method*] ("[I]ntellectual property assets are inherently dissimilar, and the dissimilarity is sometimes required by law."); Merges, *Of Property*, *supra* note 45, at 2664 ("Because each asset covered by an [intellectual property right] is in some sense unique . . . it is difficult for a court in an infringement case to properly value the right-holder's loss."); David Tenenbaum, *Valuing Intellectual Property Assets*, COMPUTER & INTERNET LAW., Feb. 2002, at 1, 4. ("By their very nature, [intellectual property] assets tend to be relatively unique, and therefore, it is unusual to find exact comparables in this arena.").

270. *See supra* text accompanying notes 39, 51, 93, 113–15.

271. *See supra* note 28.

272. *See supra* note 24.

273. *See supra* notes 25–26.

B. THE CRIMINAL SENTENCING CONUNDRUM

Although our nation has been in the business of protecting some forms of intellectual property since the First Congress in 1790,[274] relying on the criminal law as a mechanism to enforce intellectual property rights is relatively new. Patent law still has no such protection; violations of copyright law were not a misdemeanor until 1897 and not a felony until 1982; trademark violations were not criminal until 1984; and the theft of trade secrets was not a crime until 1996.[275] The judiciary has had little time thus far to absorb this relatively new innovation in the law of intellectual property.

Since 1987, sentencing in federal criminal cases has been governed at least in part by the U.S. Sentencing Guidelines.[276] Until recently, the Guidelines were binding on the federal judiciary; a court had to justify any departure from the recommended Guidelines range or face reversal from an appellate court.[277] In 2005, the Supreme Court decided *United States v. Booker* and held that mandatory application of the Guidelines violated a defendant's Sixth and Fourteenth Amendment rights to have a jury determine the maximum sentence. The Court ruled that the Guidelines were to retain vitality, but solely as an advisory guide to be consulted in reaching a sentence that meets the goals of the federal Sentencing Reform Act.[278]

Currently,[279] the key consideration that a court is to consider in fixing the advisory Guidelines sentence for an intellectual property crime is the

274. *See supra* notes 36, 52.

275. *See supra* text accompanying notes 50, 80–89, 107–12, and 117–22.

276. The Sentencing Guidelines were ordered to be created as part of the Sentencing Reform Act of 1984, Pub. L. No. 98-473, 98 Stat. 1837.

277. *See, e.g.*, Koon v. United States, 518 U.S. 81, 92–93 (1996) (describing the departure system under the then-mandatory Guidelines).

278. United States v. Booker, 543 U.S. 220, 242–45 (opinion of Stevens, J.), 259–65 (2005) (opinion of Breyer, J.). The contours of this sea-change in federal sentencing law are still being sorted out. The lower federal courts are badly split regarding the residual weight to be given the now-advisory Guidelines. The Court just recently sorted out some of these issues in *Rita v. United States*, 127 S. Ct. 2456 (2007) (holding that appellate courts may accord a rebuttable presumption of reasonableness to sentences within the applicaple Guidelines range). But several issues remain. *See, e.g.*, United States v. Gall, 446 F.3d 884 (8th Cir. 2006), *cert. granted*, 127 S. Ct. 2933 (2007) (granting review to determine whether a substantial variance from the advisory Sentencing Guideline sentence must be justified by "extraordinary circumstances").

279. The relevant Guidelines have been amended over the years. Initially, the Guidelines permitted courts to rely upon the market price of the counterfeit or "black market" good. *See infra* note 284; Coblenz, *supra* note 113, at 257 ("The value of the infringing goods is the main variable in determining sentencing under the Sentencing Guidelines.").

market value of the intellectual property right infringed.[280] Relying on market value as the key determinant is the same approach used by the Guidelines for the theft of any tangible property.[281] Indeed, the theft of trade secrets is explicitly governed by the tangible property theft Guideline.[282] In this respect, the Guidelines use the same model for criminal sentencing of *all* property—whether it be tangible or intellectual.

Notwithstanding the seemingly simple mandate of the Guidelines, the courts have encountered much difficulty in imposing sentence in intellectual property cases (or in their forerunners), and the result has been chaos. Some courts have followed the Guidelines as best as they can, and relied upon market value, at least with respect to goods that have a ready market.[283] Many of those cases, however, use the market value of the

280. The Guidelines specify that copyright and trademark crimes are governed by Sentencing Guideline § 2B5.3. *See* U.S. SENTENCING GUIDELINES MANUAL app. A (assigning violations of 18 U.S.C. §§ 2318–2320 (2000)) to § 2B5.3. Section 2B5.3 assigns a "base offense level" that reflects the relative seriousness of the crime, but requires courts to increase the sentence based on the "infringement amount." *Id.* § 2B5.3(a), (b)(1). In most cases, "infringement amount" is defined as "the retail value of the infringed item"—that is, "the copyrighted or trademarked item with respect to which the crime against intellectual property was committed"—"multiplied by the number of infringing items." *Id.* cmt. nn.1–2. This general rule applies where the counterfeit item appears to be reasonably identical to the real thing or is a digital copy; where the retail value of the counterfeit item is difficult to calculate; or where the retail value provides a "more accurate assessment of pecuniary harm" to the intellectual property owner. *Id.* "Retail value" is defined as "the retail price of that item in the market in which it is sold." *Id.* cmt. n.3.

281. The Guidelines specify that the appropriate Guideline to use for theft offenses is Sentencing Guideline § 2B1.1. *See id.* app. A. Under this Guideline, the primary driving determinant is "loss." *Id.* § 2B1.1(b)(1) (providing a table for increasing the relevant offense level depending on the monetary amount of "loss"). The Guideline directs a court to make a "reasonable estimate of the loss," and lists several factors relevant to that consideration—the primary being "[t]he fair market value of the property unlawfully taken or destroyed." *Id.* cmt. n.3(C). Should the fair market value be difficult or impossible to ascertain, the Guidelines specify that a court may also look to the "gain that resulted from the offense," *id.* cmt. n.3(B), or "the cost to the victim in replacing [the stolen] property," *id.* cmt. n.3(C)(i). *See, e.g.*, United States v. Berkwitt, 619 F.2d 649, 658 (7th Cir. 1980) (explaining that in prosecution for theft of stolen property under 18 U.S.C. § 2314, the court uses a "retail thieves market" price to assess value of counterfeit eight-track tapes), *abrogated on other grounds*, Dowling v. United States, 473 U.S. 207 (1985); United States v. Whetzel, 589 F.2d 707 (D.C. Cir. 1978) (same); United States v. Galvez, 108 F. Supp. 2d 1369 (S.D. Fla. 2000) (using market value for wholesale market because items were taken while in a wholesaler's possession).

282. *See* U.S. SENTENCING GUIDELINES MANUAL app. A (specifying that the appropriate Guideline for violations of 18 U.S.C. §§ 1831–1832 is Sentencing Guideline § 2B1.1).

283. *See, e.g.*, United States v. Slater, 348 F.3d 666, 670 (7th Cir. 2003) (using retail value of genuine software because the infringing copies were "virtually equivalent" to the genuine software even though Sentencing Guideline § 2B5.3 at the time required use of the black-market value); United States v. Larracuente, 952 F.2d 672, 674 (2d Cir. 1992) ("Where, as here, unauthorized copies are prepared with sufficient quality to permit their distribution through normal retail outlets, the value of the infringing items is their normal retail price to ultimate consumers who purchase from such outlets.").

counterfeit product rather than the genuine product.[284] Finding market value too difficult to ascertain or too far removed from the true "value" of the right infringed, other courts have looked to the cost of developing the intellectual property.[285] Still others have eschewed any attempt to value the intellectual property and have instead looked to statutory damages in civil cases[286] or the cost of a license to use the intellectual property.[287]

As these cases illustrate, the federal courts in imposing criminal sentences have reasoned by analogy to the valuation models used when intellectual property is sold or is valued for accounting purposes. Even in this context, there is little agreement on how to value intellectual property assets.[288] The market value model, which looks to the market price an

284. *See, e.g.*, United States v. Guerra, 293 F.3d 1279, 1292 (11th Cir. 2002); United States v. Bao, 189 F.3d 860, 867 (9th Cir. 1999); United States v. Kim, 963 F.2d 65, 68–69 (5th Cir. 1992).

285. For instance, in *United States v. Wilson*, 900 F.2d 1350 (9th Cir. 1990), the court sentenced a defendant for stealing research data on a protein-development process and for offering to sell it on the black market. The court took the research and development costs for the protein—approximately $8 million—and reduced it by 50% in light of a subsequent patent and by another 75%; the court then valued the property at $1 million. The court rejected the defendant's request to use the $200,000 asking price he offered on the black market, finding that "[a] strict market approach [would] measure[] only the gain to the defendant while virtually ignoring the harm suffered by the victim." United States v. Wilson, 900 F.2d 1350, 1356 (9th Cir. 1990). *See also* United States v. Pemberton, 904 F.2d 515, 516–17 (9th Cir. 1990) (using cost to arrive at 80% of the value of a stolen architectural drawing that was 80% complete, and refusing to use the market value); United States v. Asper, 753 F. Supp. 1260, 1282 (M.D. Pa. 1990) (refusing to use market price and instead using replacement cost for wildlife parts as the measure for sentencing, reasoning that "[r]eplacement or acquisition cost is a more accurate reflection of the value of the wildlife trophies"), *aff'd*, 941 F.2d 1203 (3d Cir. 1991) (unpublished disposition).

286. In *United States v. Manzer*, 69 F.3d 222 (8th Cir. 1995), in a prosecution for stealing signal broadcast by HBO, the actual loss of the subscriber services to HBO was $6.9 million. Rather than impose this higher loss amount, the court opted to rely upon the minimum statutory damages for copyright infringement per signal recipient, yielding a total loss amount of $2.7 million. United States v. Manzer, 69 F.3d 222, 228–29 (8th Cir. 1995).

287. In *United States v. Stegora*, 849 F.2d 291 (8th Cir. 1988), the defendant stole a sample of 3M's substances and sent it to 3M's competitors. In a prosecution for interstate transportation of stolen property (as the EEA, *see supra* note 117, had not yet been enacted), the court looked at three different possible models for valuing the stolen trade secret—the research and development costs, the value of the secret on the thieves' market, and the price that 3M would charge to license use of that secret. United States v. Stegora, 849 F.2d 291, 292 (8th Cir. 1988). The court found it unnecessary to select a particular model because the value under each exceeded the $5,000 threshold for prosecutions under § 2314. *Id.*

288. *See* Ted Hagelin, *Valuation of Intellectual Property Assets: An Overview*, 52 SYRACUSE L. REV. 1133, 1139 (2002) [hereinafter Hagelin, *Valuation*] ("[N]o single method for valuing intellectual property assets will be definitive."); Merges, *Of Property*, *supra* note 45, at 2659 ("Valuation [of intellectual property rights] is at least as great a problem as detection."). *See also* Frederic D. Van Arnam, Jr., *Current Trends in the Dutiable Status of Royalty Payments: How the* Hasbro *Rulings Affect Imposters*, 16 N.Y.L. SCH. J. INT'L & COMP. L. 201, 233 (1996) ("[I]t is inherently difficult to place a value on intellectual property rights . . . ."). Undoubtedly, part of this difficulty is because "[v]aluations

intellectual property asset would likely fetch,[289] has its limitation because, for many forms of intellectual property, there simply *is* no market[290] and, even if there were, market participants are reluctant to share information.[291] The cost model, as its name suggests, values an asset based on the research and development costs attendant to its creation.[292] The last commonly used model is the income model,[293] which values the asset based on the net present value of the stream of future income most likely to result from the asset.[294] Although these models have provided courts more options than

of [intellectual property] assets take place in a wide variety of settings and circumstances and for many different purposes." Tenenbaum, *supra* note 269, at 1.

289. Hardin, *supra* note 11, at 669 ("The market resolves the problem of complex causation of value by largely ignoring it and relying on demand and supply relations."); Tenenbaum, *supra* note 269, at 2 (describing the market value approach as where "[b]uyers and sellers . . . determine their ceiling and floor, respectively, as a function of the economic value of their next best alternative").

290. *Wilson*, 900 F.2d at 1356 (commenting on the "virtually nonexistent open market" in stolen protein-production processes); *Pemberton*, 904 F.2d at 517 ("Being unique, the [architectural] drawings were not fungible items for which there was broad and active market."); Hagelin, *Competitive Advantage*, *supra* note 269, at 80 ("[T]here are no established markets for the exchange of intellectual property assets."); Hardin, *supra* note 11, at 664–65 (noting that reliance on market price in the intellectual property arena is difficult because there are few markets for intellectual property assets).

291. Hagelin, *Competitive Advantage*, *supra* note 269, at 80–81 ("[T]he details of intellectual property exchanges, especially prices, are rarely available to the public."). Indeed, Congress has taken steps to encourage victims of trade secret theft to share confidential information, including valuation data, with the authorities by statutorily providing for *in camera* review, protective orders, and the right of interlocutory appeal. 18 U.S.C. § 1835 (2000).

292. Tenenbaum, *supra* note 269, at 3 (noting that the cost approach "values assets based on the cost to create and develop the assets under consideration"). Alternatively, it is known as the "replacement cost" model. *See* Hagelin, *New Method*, *supra* note 269, at 359 (describing that the cost method "measures the value of an asset by the cost to replace the asset with an identical or equivalent asset"); Tenenbaum, *supra* note 269, at 3 (noting equivalence between development cost and replacement cost, which is "the anticipated cost to replace an asset already owned").

293. These models by no means comprise the entire universe of possible valuation approaches. *See, e.g.*, Hagelin, *New Method*, *supra* note 269, at 397–403 (outlining a "competitive advantage valuation" approach that uses a mixture of income and disaggregation methodologies).

294. Hagelin, *New Method*, *supra* note 269, at 363 (noting that the income method "values an asset based upon the present value of the net economic benefit (net future income stream) expected to be received over the life of the asset"); Tenenbaum, *supra* note 269, at 4 (describing that the income approach "values assets based on the present value of the future income streams expected from the [intellectual property] asset under consideration"). Economists have proposed several methods of undertaking the income-valuation inquiry. The four leading methods include: (1) the "relief from royalties" method, which looks to what the owner would pay a third party under a licensing agreement to obtain benefit of the asset's income stream; (2) the "residual earnings" method, which disaggregates a company's income to determine how much income is attributable to the intellectual property asset; (3) the "excess earnings" method, which attempts to ascertain the incremental profit earned by the asset due to its propriety nature over the generic version of that product; and (4) the "postulated loss of income" method, which estimates the reduction in the company's overall income due to absence of the intellectual property asset. Hagelin, *New Method*, *supra* note 269, at 364–70; Tenenbaum, *supra* note 269, at 5–7. Given these options, it is no wonder that "[t]he valuation of intellectual property assets is a trillion dollar problem in today's economy." Hagelin, *Valuation*, *supra* note 288, at 1139.

simply "market value," they overlook key distinctions in the valuation context that persist between asset valuation for purposes of sale and valuation in criminal sentencing.

C. RECOGNIZING THE HETEROGENEITY THROUGH PARADIGM SHIFT

Despite the attractiveness of treating all property similarly and hence equating criminal infringement of intellectual property rights with the theft of tangible property, this homogenous approach overlooks the salient fact that the intrusion occasioned by these two types of criminal activity is theoretically distinct. When a criminal destroys or absconds with tangible property, the property's owner suffers two distinct harms—the criminal has not only interfered with the owner's ability to use the property, but has also dispossessed the owner of the property.

When a criminal steals a trade secret or infringes a copyrighted work, counterfeit good or service bearing a trademark, the criminal has only inflicted one type of harm—he has interfered with the asset owner's exclusive right to control the intellectual property. The criminal has not dispossessed the asset holder of the intellectual property itself.[295] At first blush, this might seem to support the notion that an intellectual property thief inflicts less harm than that thief's counterpart who steals tangible property. That would be incorrect, however, because the nature of intellectual property as a nonexclusive and nonrivalrous public good means that dispossession of intellectual property is impossible.[296] Interference is the only harm that *can* be inflicted on intellectual property owners by thieves.[297] Indeed, because the intellectual property owner's primary right

295. *See supra* note 32. *See also* Gordon, *supra* note 22, at 1356–57 (discussing how interference absent dispossession with respect to real property could amount to a nuisance). Indeed, the absence of dispossession was instrumental to the Supreme Court's decision in *Dowling v. United States*, 473 U.S. 207 (1985). In that case, the Court held that bootlegged tape recordings that infringed upon copyrighted works did not qualify as "stolen property" for purposes of 18 U.S.C. § 2314, which makes interstate transportation of stolen property a federal crime. In particular, the Court observed that the thief in this case did not "assume physical control over the copyright; nor [did] he wholly deprive its owner of its use." *Id.* at 217. The Court was thus reluctant to treat copyrighted works like tangible property, also because doing so would have no logical backstop and would require the criminal transportation of patented inventions across state lines, even though Congress had not seen fit to enact criminal sanctions regarding patents. *Id.* at 226–27.

296. *See supra* text accompanying notes 24–26.

297. This explains why the analogy to the sale of intellectual property assets fails. *See supra* text accompanying notes 288–94. When rights holders *sell* their intellectual property asset, the holders not only grant the buyers the right to interfere with the holders' exclusive right to control the asset, but also cede the holders' own right to do so. By excluding *themselves*, the asset sellers dispossesses themselves of the right to continue to use the intellectual property, which is as close to physical dispossession as is possible with such rights. When a thief steals intellectual property, there is no voluntary act by the asset

is that owner's right to exclude others, interference with that right is especially harmful.[298]

The distinction between dispossession and interference finds purchase in each of the leading property theories, which acknowledge a diminution in the value of property occasioned by interference without dispossession. Under the conceptual bundle of rights approach, the right to possess and the right to exclude others (and preclude interference) are two distinct rights within the "bundle of sticks" defining property rights; eliminating the right to exclusive use alone reduces the universe of the owner's rights. Under the natural law and desert theories, a person who interferes with the creator's labor deprives the owner of exclusive control over that labor and, in so doing, also disturbs the moral right to protect the integrity of the resultant work and its proper attribution. Under personality theory, property owners are able to distinguish themselves from others less forcefully if others may also use their property, notwithstanding the fact that they may still possess it, because the loss of exclusivity diminishes their ability to stand out from the thief who also possesses the property. Because instrumental theory is already calibrated specifically to the trade-offs of intellectual property, it already accounts for the inability to dispossess asset holders of their intellectual property; nevertheless, that theory counsels in favor of a remedy for interference with the owner's exclusive use of the property sufficient to preserve the incentives to create. Lastly, entitlement theory recognizes that intellectual property assets are protected most often by property rules with remedies for both dispossession and interference; because exclusive use is a key component of property ownership under this theory, those remedies would continue to exist for interference alone.

In light of these considerations, it is inappropriate to look to the *theft* of tangible goods for guidance in valuing the harm occasioned by criminal interference with intellectual property assets, as it both overvalues (because no dispossession is involved) and undervalues (because it places insufficient weight on the importance of exclusivity for "public good" items such as intellectual property). The more apt analogy is one that looks solely to the harm occasioned by interference without dispossession. Criminals and others have been inflicting this type of harm on the owners of tangible property for centuries now; the resultant prosecution, either civilly or criminally, is for *trespass*. With a trespass, the offender has interfered with the owner's right to exclusive control of the property but

owner to cede the owner's exclusive rights, and, accordingly, the thief takes *less* than the full value of the asset.

298. *See* Merrill, *Right to Exclude*, *supra* note 30, at 749; Palmer, *supra* note 6, at 864.

has not dispossessed the owner of that property.[299]

For these reasons, sentencing for criminal infringement of intellectual property rights should be grounded on a trespass paradigm rather than a theft paradigm. This conclusion flows from the theoretical distinctiveness of intellectual property, and from the type of harm that nonconsensual interference inflicts upon the asset owner. Although the theft paradigm would initially seem to be the most appropriate for *all* types of property, such a homogenous approach to property theory yields a paradigm that is logically unsound and has spawned a pragmatic quagmire. In the next Part, I outline how the trespass paradigm would alter and simplify criminal sentencing for intellectual property theft, thereby demonstrating the virtues of a more nuanced and heterogeneous approach to property theory.

V. CRIMINAL SENTENCING UNDER THE TRESPASS PARADIGM

Because the Guidelines governing sentencing for intellectual property offenses currently rest upon a theft paradigm, the shift to a trespass paradigm will substantially transmogrify the inquiry that courts must undertake when imposing sentence. The most substantial change will be to the manner in which "harm" is measured—that is, based on interference but not any dispossession. This change necessarily has a ripple effect that will require a retooling of other factors attendant to sentencing.

A. THE CALCULATION OF HARM

Under long-standing civil trespass law, a temporary, intentional trespasser is liable to a property owner for the greater of the harm caused to the property (that is, the property owner's loss) or the trespasser's gain from the trespass (under a theory of disgorgement).[300] Given the close

299. *See* Epstein, *Liberty*, *supra* note 150, at 4 ("[W]e should not forget the close parallels between actions for trespass and those for infringement . . . ."); Gordon, *supra* note 22, at 1390 ("The 'trespass' character of infringement suits makes the exclusive rights in copyright easier to use."). *See also* Gordon, *supra* note 22, at 1366 ("As the tort cause of action denominated 'trespass' vindicates the duty to stay off strangers' land, the tort cause of action denominated 'infringement' vindicates the duty to refrain from copying others' works of authorship."); Strahilevitz, *supra* note 126, at 1836–37 (describing the right of property owners to exercise the hermit's and bouncer's right exclusionary strategies as being "trespass-based" because they control interference with the property owner's possession of property).

300. *See, e.g.*, R & S Dev., Inc. v. Wilson, 534 So. 2d 1008, 1012 (Miss. 1988) ("Where, as in this case, the injury to the land [occasioned by a trespass] 'is temporary and subject to restoration, the proper measure of damage is the cost of restoration.'") (citation omitted); Mortimer v. Manhattan Ry. Co., 8 N.Y.S. 536, 538 (N.Y. Sup. Ct. 1890) ("The rule is now settled in this state that the proper measure of damages for a trespass upon real estate, or for the maintenance of a nuisance, is the

analogy between trespass of land and interference with intellectual property rights,[301] it is hardly surprising that—in the civil context—awards in infringement actions are typically keyed to trespass-based damages that look to the asset owner's loss or the infringer's gain.[302] Indeed, this is the approach the Guidelines employ for sentencing in most criminal trespass offenses.[303] For quite obvious reasons, this measure of harm is distinct from the theft of the property because trespassers are not held responsible for the entire value of the property over which they trespass.[304] Indeed, in most cases, this measure is likely to attach a lower monetary harm than the theft analogue that rests on an assessment of the full value of the underlying property itself.

Once more, the challenging question is how to assess and calculate the intellectual property owner's loss—that is, the harm occasioned by criminal interference with the intellectual property rights. Most of the models used to assess value under the theft paradigm (the market, cost, and income models) are inapposite because they rely upon the full value of the asset as

difference in rental value free from the trespass or nuisance and subject to it."), *aff'd*, 129 N.Y. 81 (N.Y. 1891); Andrew J. Frank, Comment, *Restitution: Finally an Appropriate Remedy for Creditors' Abuse of Reaffirmation Agreements*, 19 BANKR. DEV. J. 143, 168 (2002) ("Disgorgement of profits is most commonly ordered as a result of a conscious wrongdoing in the following instance[] . . . trespass . . . ."); Mark P. Gergen, *What Renders Enrichment Unjust?*, 79 TEX. L. REV. 1927, 1937 (2001) ("Trespass and conversion are remedied in restitution, but disgorgement is appropriate only if the infringement of a property interest is willful . . . ."); J. Richard White & Jeffrey T. Arnold, *Real Property*, 57 SMU L. REV. 1157, 1199 (2004) ("[R]ecovery for temporary trespass is limited to the amount necessary to place the owner of the property in the same position he occupied prior to the injury."). *See also* Gordon, *supra* note 22, at 1357–58 (arguing that "intruders who cause no harm can be required to pay not only nominal damages but potentially substantial sums in restitution if they have either profited or saved money by using the other's land").

301. *See supra* text accompanying notes 295–99.

302. *See supra* text accompanying notes 72–74 and 99. For the theft of trade secrets, the Uniform Trade Secrets Act provides for recovery of "both the actual loss caused by misappropriation and the unjust enrichment caused by misappropriation that is not taken into account in computing actual loss." UNIF. TRADE SECRETS ACT, *supra* note 113, at § 3(a). A copyright owner is entitled "to the larger of either his own lost profits or the defendant's profits attributable to the infringement." Blair & Cotter, *supra* note 40, at 1605. *See also* 17 U.S.C. § 504(b) (2000). The victim of trademark infringement is entitled to a similar measure of damages. *See* 15 U.S.C. § 1117(a); Blair & Cotter, *supra* note 40, at 1609–10 ("The prevailing plaintiff in a federal trademark infringement action . . . may recover the defendant's profit attributable to the infringement and any damages sustained by the plaintiff, as long as the court avoids double counting.").

303. *See* U.S. SENTENCING GUIDELINES MANUAL §§ 2B2.1(a), (b)(2) (2005). *Cf. id.* § 2B2.3 (offense of trespass across government property, which provides for an account of harm only where there is a trespass onto a government computer network). Thus, the Guidelines appear to incorporate the traditional, common-law rule for criminal trespass except in the narrow circumstance of trespass across government land alone, where there is unlikely to be any appreciable monetary harm to the property itself.

304. *See supra* text accompanying note 281.

if it were being sold, but this ignores that an asset's seller relinquishes the right to use the asset once it is sold (unlike a victim, who may still use the asset after its theft).[305] The appropriate vehicle for assessing the intellectual property owner's loss, if any harm is actually caused but is difficult to measure, is the cost that the owner would charge for a license to use the asset. As described above, the theoretical harm suffered by the owner is interference with the exclusive right to control the intellectual property.[306] A license is a consensual grant of permission to interfere with that same exclusive right.[307] Although criminal inference with that right is nonconsensual, the harm occasioned is no different for that fact. Consequently, the harm to the property owner should be measured by the greater of any actual monetary harm suffered, or, if actual harm is proven but it is impossible to calculate, by the cost of granting a license to a third party for usage similar to that occasioned by the criminal infringer.

B. RECALIBRATING THE GUIDELINE

The theoretical distinctiveness of intellectual property ostensibly militates in favor of further changes to the Guideline governing sentencing for intellectual property crimes. As noted above, the very essence of an intellectual property right is the right to exclusively control its use.[308] Moreover, this right is more important for intellectual property rights than for tangible property because tangible property's *physicality* renders it inherently scarce, such that possession by the owner makes simultaneous possession or interference by others more difficult.[309] As a result, the primary harm occasioned by an intellectual property crime is the act of interference itself—irrespective of the extent of harm caused by the interference.[310] In this respect, the Guideline for bank robbery is instructive because it places primary emphasis on the fear and terror caused by the robbery itself, and substantially less emphasis on the actual amount of

305. *See supra* note 297.

306. *See supra* note 297.

307. *See* Penner, *supra* note 32, at 745 ("Licensing use amounts to lifting the licensees' duties in rem not to interfere with the owner's property."); Tenenbaum, *supra* note 269, at 2 ("As a general proposition, the value of owning and directly exploiting an [intellectual property] asset is at least equal or greater than the value of using that asset under a license from a third party."). Although the nomenclature differs, a license is similar to the relief from royalty approach to cost valuation, which looks at the cost of a license. *See supra* note 294.

308. *See supra* Part III.B.

309. *See supra* text accompanying note 28.

310. *See supra* text accompanying note 28.

money taken from the bank.[311] There should be a similar downgrading of the importance of harm in each particular intellectual property case as well, as a means of acknowledging that the primary evil is interference and not any resultant harm.

Consequently, the basic measure of the harm occasioned by this type of crime—that is, the "base offense level"—should be increased.[312] Doing so is necessary to emphasize that the harm central to the intellectual property right itself—that is, the right of exclusive use—is constant and important irrespective of the monetary harm arising from the criminal's illegal interference. The shift from the theft paradigm to the trespass paradigm, as noted above, is also likely to yield far lower harm calculations, as harm will need to be proven to a court's satisfaction rather than merely hypothecated from the overall value of the intellectual property asset. To keep the base offense level at its current level (which contemplates sentences not involving incarceration in most cases)[313] would have the effect of downgrading the importance of intellectual property crimes by reducing the overall punishment, which is defined by the Guidelines as the sum of the base offense level and the harm caused.[314]

Similarly, on a theoretical level, it is important to have a sufficiently high base offense level to avoid having the same measure of harm for

311. Guideline § 2B3.1 provides that the base offense level for bank robbery is twenty, which yields a sentencing range of thirty-three to forty-one months for a first-time offender. *See* U.S. SENTENCING GUIDELINES MANUAL § 2B3.1(a) (2005); *id.* ch. 5, pt. A (Sentencing Table). The Guideline contains an upward adjustment for the amount of money taken from the bank, but this adjustment is not triggered until the loss exceeds $10,000, and even provides for additional increments only upon the taking of large sums of money. *See, e.g.*, *id.* § 2B3.1(b)(7) (providing for only a seven-level increase if the amount taken exceeds $5,000,000).

312. The base offense level for various federal crimes varies depending upon the relative severity of the offense vis-à-vis other offenses as well as the relative weight to be attached to the underlying crime versus other aggravating and mitigating facts. With respect to the cross-offense severity, the Guidelines provide that the base offense level for first-degree murder is forty-three (resulting in a first-time offender sentence of life imprisonment), *see* U.S. SENTENCING GUIDELINES MANUAL § 2A1.1(a), for kidnapping is thirty-two (resulting in a first-time offender sentence of 121 to 151 months), *see id.* § 2A4.1(a), and for fraud and theft crimes is six or seven (resulting in a first-time offense sentence of zero to six months), *see id.* § 2B1.1(a). With respect to the relative weight, the fraud guideline assigns a low base offense level of six but provides anywhere from a two- to thirty-level upward adjustment based on loss, whereas bank robbery assigns a relatively high base offense level of twenty, but provides for an upward loss adjustment of only one to seven levels. *See supra* note 280. *Compare id.* §§ 2B1.1(a), (b)(1) *with id.* §§ 2B3.1(a), (b)(7).

313. The current base offense level for copyright and trademark infringements is eight, which contemplates a sentencing range for first-time offenders of zero to six months. *Id.* § 2B5.3(a). *See also id.* ch. 5, pt. A (Sentencing Table). The base offense level for the theft of trade secrets is six, which contemplates the same sentencing range. *Id.* § 2B1.1(a)(1). *See also id.* ch. 5, pt. A (Sentencing Table).

314. *See, e.g.*, *id.* § 2B1.1 (for theft of trade secrets); *id.* § 2B5.3 (for trademark and copyright infringement).

criminal and civil enforcement. Because the trespass paradigm's approach to calculating harm more closely tracks the approach used to assess infringement damages in civil cases,[315] there is some need to have a higher base offense level to avoid equating the punishment for unlawful acts (as sanctioned in civil cases) and illegal acts (as punished in criminal prosecutions), and to account for the additional harm that a thief imposes on the rule of law by that thief's actions[316] and for the possibility of nondetection.[317] Indeed, Calabresi and Melamed have argued that criminal penalties for harm to entitlements must entail some sort of "kicker"—some additional penalty over and above the civil penalty—in order to prevent thieves from converting a property rule prohibiting nonconsensual takings into a liability rule authorizing nonconsensual takings but with the payment of a post-theft penalty.[318] How high the base offense level should be pegged would be determined by the extent of deterrent value that policy makers wanted to attach to criminal enforcement.[319]

There are other facts aside from the underlying interference and the harm occasioned that may influence the appropriate sentence in criminal infringement cases. For instance, if the infringer has committed the crime for commercial gain rather than simply personal use, that may be an aggravating factor.[320] By the same token, trademark offenses may involve

315. *See supra* text accompanying note 302.

316. *See* Calabresi & Melamed, *supra* note 200, at 1126 ("The thief not only harms the victim, he undermines rules and distinctions of significance beyond the specific [crime].").

317. *See* Blair & Cotter, *supra* note 40, at 1621–22 ("[O]ne cannot accurately calculate the probability of detection.").

318. Calabresi & Melamed, *supra* note 200, at 1125 ("For us to charge the thief with a penalty equal to an objectively determined value of the property stolen would be to convert all property rule entitlements into liability rule entitlements."). *See* Chatterjee, *supra* note 26, at 894 ("In the context of the property/liability model, traditional criminal law prevented individuals from undermining property and inalienability rules."); Green, *supra* note 22, at 233 (describing how a person "commit[s] a crime when . . . bypass[ing] an existing market") (quoting Stephen P. Garvey, *Punishment as Atonement*, 46 UCLA L. REV. 1801, 1832–33 (1999)). In Calabresi and Melamed's view, the solution is to add "an undefinable kicker which represents society's need to keep all property rules from being changed at will into liability rules." Calabresi & Melamed, *supra* note 200, at 1126.

319. To the extent that policy makers feel that the stigma of federal conviction is sufficient by itself to acknowledge the additional harm caused by a nonconsensual infringement, *see, e.g.*, Chatterjee, *supra* note 26, at 895 ("[T]raditional criminal penalties impose a 'stigma' that does not attach to other sanctions."); Lemley & Reese, *supra* note 19, at 1396–97 (same), they could set the base offense level at a level that contemplates a probationary and nonincarcerative sentence. Should they feel that some prison time is required in most cases to protect the societal interests against such infringements, policy makers can set a higher base offense level.

320. Many Guidelines similarly account for a defendant's acts in using a crime as the basis for operating a business. U.S. SENTENCING GUIDELINES MANUAL § 2B1.1(b)(4) (2005) (providing for an increase in sentence for theft where person was "in the business of receiving and selling stolen property"); *id.* § 2B1.5(b)(4) (providing for increase in sentence for theft or damage to cultural heritage

the counterfeiting of goods—such as batteries or baby formula—that, if sold with a counterfeit trademark but of inferior quality, could pose a risk to the public health and safety; those scenarios would also warrant a more severe sentence.[321]

C. Theoretical Efficacy

As discussed, this redesigned Guideline results in a more theoretically efficacious sentencing structure. The majority of property theories take no clear position with respect to civil enforcement of property rights versus criminal enforcement: The "bundle of rights" does not differ depending on the mechanisms used to vindicate them; individuals' right to their labor or their deserts are equally protected irrespective of *how* they are protected; and a person's personality is similarly unaffected by the mechanism used to protect the communicative aspects of property ownership. Entitlement theory, as explained above, counsels in favor of some form of "kicker"—whether it be the stigma of conviction alone or an ostensibly higher sentencing range as well—to prevent criminals from unilaterally converting society's erection of a property rule into a liability rule.

Instrumental theory has the most to say about the utility of the trespass paradigm. Because the thrust of instrumental theory is judging the efficacy of a system against its purported goals,[322] it is important to define the policy goals of criminal sentencing for intellectual property crimes. In this sense, instrumental theory draws its policy aspirations from two sources: those governing intellectual property rights,[323] which are set forth earlier in this Article, and those governing criminal sentencing.[324]

With respect to the policies underlying intellectual property—and assuming for the moment that criminal enforcement is appropriate in the

resources where the defendant committed the offense "for pecuniary gain" or a "commercial purpose"); *id.* § 2B6.1(b)(2) (providing for increase in sentence where defendant was "in the business or receiving a selling stolen property"). Conversely, the current Guidelines account for a downward adjustment where there is a lack of personal, profit motive. *See id.* § 2B5.3(b)(4) (providing for a two-level reduction in level where "the offense was not committed for commercial advantage or private financial gain").

321. Some Guidelines—including the Guidelines applicable to copyright, trademark and trade secrets crimes—currently provide for upward adjustments where there is a danger to public health or safety. *See, e.g.*, *id.* § 2B5.3(b)(5) (providing for upward enhancement in fraud or theft cases where the offense involves "the conscious or reckless risk of death or serious bodily injury"); *id.* § 2B1.1(b)(12) (same).

322. *See supra* text accompanying notes 164–65.

323. *See supra* text accompanying Part III.A.5.

324. *See* 18 U.S.C. § 3553(a) (2000).

first place—a sentencing system derived from the trespass paradigm would seem better suited to achieving those goals than the current, theft-based Guideline. As discussed above, the protection afforded to intellectual property rights represents a trade-off between the encouragement of creative works by offering them some form of statutory protection, and the publication and dissemination of those works in the public domain; tipping the balance in either direction diminishes at least one of the competing policy goals.[325] Because a trespass-based sentencing regime more accurately tracks the actual harm caused than the theft-based regime, it ostensibly represents an improvement over the current system because it more closely calibrates the balance of competing interests and avoids over-deterrence of lawful uses of intellectual property rights (such as fair use).

With respect to the goals of sentencing, the more accurate measure of harm resulting from the trespass-based model also better serves the policy aims of the criminal sentence system. That is because it more truthfully reflects "the nature and circumstances of the offense"[326] and better enables a court to fashion a sentence that "reflect[s] the seriousness of the offense,"[327] "provide[s] just punishment,"[328] and "afford[s] adequate deterrence to criminal conduct."[329] It also avoids the sentencing disparity that results from a value-driven system, where defendants who inflict the same amount of harm are treated differently if the underlying value of the asset happens to be different.[330]

For these reasons, the trespass paradigm appears to be more theoretically consistent both with property theory and with more pragmatic concerns.

VI. CONCLUSION

As I hope this Article has illustrated, it is imprudent to assume that

325. *See supra* text accompanying notes 166–72.

326. 18 U.S.C. § 3553(a)(1) (2000) ("The court, in determining the particular sentence to be imposed, shall consider . . . the nature and circumstances of the offense and the history and characteristics of the defendant . . . .").

327. *Id.* § 3553(a)(2)(A) ("The court . . . shall consider . . . the need for the sentence imposed to reflect the seriousness of the offense . . . .").

328. *Id.* § 3553(a)(2)(A) ("The court . . . shall consider . . . the need for the sentence imposed . . . to provide just punishment for the offense . . . .").

329. *Id.* § 3553(a)(2)(B) ("The court . . . shall consider . . . the need for the sentence imposed . . . to afford adequate deterrence to criminal conduct . . . .").

330. *Id.* § 3553(a)(6) ("The court . . . shall consider . . . the need to avoid unwarranted sentence disparities among defendants with similar records who have been found guilty of similar conduct . . . .").

intellectual property should be treated similarly to all other forms of property simply because it qualifies as “property” under nearly every theoretical, definitional criteria. The discord among the courts as to how to impose sentences in federal criminal infringement and theft cases involving federally protected intellectual property assets—namely, copyright, trademark, and trade secrets—poses a vivid example of the dangers of a one-size-fits-all approach to property theory. The Sentencing Commission has inadvertently created chaos by opting to treat the theft of all forms of property, tangible or intellectual, using the same measure of harm—that is, the market value of the asset as a whole. The Commission failed to appreciate the unique nature of intellectual property as a public good that derives its primary value from its owners’ exclusive right to control the use and disposition of that asset; in other words, it unwittingly committed the sin of theoretical homogeneity.

The lesson to be drawn from this example is that property theory is contextual. Although intellectual property and other forms of property may qualify as “property,” it is important to identify any unique attributes of that property and to query whether those attributes require differential treatment with respect to the context at issue. Instrumental property theory by definition already incorporates some of this heterogeneous approach when defining its utilitarian goals, but it is an important consideration in the implementation of *any* property theory. Only by eschewing theoretical homogeneity can scholars and policy makers bridge the gap between theory and practice and fashion doctrines that harmonize—and complement—the important contributions made by both groups to the law of property.