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An Economic View of Innovation and Property Right Protection in the Expanded Regulatory State

I. INTRODUCTION

The evolving rights of private property are chameleon-like in character: as forms of wealth and personal interest alter, so do property right protections. From early protection of only traditional real property, property right protections have grown to encompass government benefits and licenses, intellectual property, and, more recently, state created regulatory interests. This expansion has progressively eroded the already battered right/privilege distinction which essentially denies property interests in privileges. This Comment explores the questions

^{1.} Governmentally created benefits, jobs, licenses, and income were hailed as the "new property." See Charles A. Reich, The New Property, 73 YALE L.J. 733, 733 (1964) [hereinafter Reich]. Professor Reich points out that this new property is a product of government largess, or wealth, and its ensuing relationship with the individual. Id. For Professor Reich's elaboration on the premise of this celebrated article, see Charles A. Reich, The Law of the Planned Society, 75 YALE L.J. 1227 (1966); Charles A. Reich, Individual Rights and Social Welfare: The Emerging Legal Issues, 74 YALE L.J. 1245 (1965).

^{2.} For an analysis of the increasing protection afforded to creators of intellectual property through broadening tort and property considerations, see Wendy J. Gordon, On Owning Information: Intellectual Property and the Restitutionary Impulse, 78 Va. L. Rev. 149 (1992).

^{3.} See G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896 cert. denied, 113 S. Ct. 2927 (1993) (9th Cir. 1992). The Rasmussen court, interpreting California state law, articulated the following standard to determine whether a property right exists in an interest created by regulation: whether the interest is capable of precise definition, of exclusive possession or control, and whether the putative owner has established a legitimate claim to exclusivity. Id. at 902-03. See infra notes 119-30 and accompanying text (analyzing the Rasmussen opinion).

^{4.} The right/privilege distinction prescribes that if a license is a right, the holder may be entitled to a hearing before its revocation; if the license is a privilege, revocation may occur without hearing or notice. Reich, *supra* note 1, at 740 (citing Gellhorn, Individual Freedom and Governmental Restraints 105-51 (1956)). Numerous beneficiaries of government wealth have weakened this distinction by seeking to transform their interests from privileges to rights. *See*, *e.g.*, William W. Van Alstyne, *The Demise of the Right Privilege Distinction in Constitutional Law*, 81 Harv. L. Rev. 1439 (1968). The *Rasmussen* court eroded the right/privilege doctrine in a differ-

of whether and to what extent newly created interests should expand property right protections. It specifically examines intellectual innovation utilized pursuant to a regulatory scheme,⁶ concluding that in such instances property protections should apply despite the fact that a property interest in a government privilege is created.⁶

A new classification of property created by modern government is a topic of heated debate with economic considerations at the core of the dispute. Part II of this Comment examines the major cases that illustrate the historical development of property right protection. It discusses both the differing property interests that are now recognized as well as the various actions emerging to protect them. Part III explains and analyzes the classical economic argument generally favoring property right expansion. In addition to the perceived advantages of maximized individual and market efficiency, this section discusses the ramifications of failing to conform property rights with changing forms of wealth and interest. Proposed limitations of property interests and alienability are discussed in Part IV which concludes that, while these arguments are valid in particularized instances, they are unable to provide a workable alternative to arguments favoring expansion.

Because theories advocating expansion and theories advocating limitation are useful in establishing and furthering the understanding of property rights, Part V attempts to answer several unresolved questions. First, are expanding property rights an economically necessary supplement to newly created forms of wealth and interest? Second, are limitations to property right establishment or alienability necessary to achieve maximum resource allocation efficiency or to ensure that property rights co-exist with other societal interests? Against the backdrop of potential expansion due to an increasingly regulated state, this section presents the argument that economic efficiency is unattainable unless

ent manner. It recognized as property an interest issued to a particular individual that entitles him to a specific privilege, without expressly transforming it into a right. *Rasmussen*, 958 F.2d at 901.

^{5.} Rasmussen provides the example utilized in this Comment. In Rasmussen, an airplane modification that allowed greater cargo capacity to DC-8 airplanes was discovered. Rasmussen, 958 F.2d at 899. However, because of regulation by the Federal Aviation Administration, the innovation could not be utilized absent approval and certification. Id. at 898-99. Accordingly, Rasmussen's innovation was only usable pursuant to a regulatory scheme.

^{6.} The position advocated by this Comment is not that there exists a right to the government privilege, but rather that once such a privilege is obtained it may not legally be converted by third parties.

^{7.} See infra notes 11-130 and accompanying text.

^{8.} See infra notes 131-70 and accompanying text.

^{9.} See infra notes 171-223 and accompanying text.

^{10.} See infra notes 224-43 and accompanying text.

property right protections can accommodate changes in what is valued and profitable to society. Part V recognizes instances where some restrictions may be desired, but concludes that generally these restrictions are outside the realm of economic analysis and will not affect economic efficiency. Finally, Part V presents a model that recognizes both the economic goals and limitation concerns inherent in the ongoing property right dilemma. This model assesses interests utilized pursuant to a regulatory scheme and determines whether property right protection is appropriate.

II. HISTORICAL BACKGROUND

Property is a nebulous legal principle without definite boundaries or origins. Property does not derive from the Constitution, but is protected by it.¹¹ It is not created by the courts, but by "existing rules or understandings that stem from an independent source, such as state law."¹² There are numerous and important considerations in the designation of an interest as property, including justice, social function, and philosophy.¹³

Recognizing potential property classifications is not a new issue. Rather, it is one that has escalated as perceptions of value and wealth, the components of a profitable society, have evolved over time. By no means has property accommodated all these changes. However, historically and modernly, scholars and legal commentators recognize that protecting interests and preventing inefficiency cannot co-exist with rigid property rights. The current debate focuses on the lengths to

^{11.} Nixon v. United States, 978 F.2d 1269, 1275 (D.C. Cir. 1992). See also James W. Ely, Jr., The Guardian of Every Other Right: A Constitutional History of Property Rights 3 (Oxford University Press 1992) (asserting that an essential component of constitutionalism is liberty; property rights are indicative of this in that they are a means of limiting government power over individuals).

^{12.} Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886, 2901 (1992) (quoting Board of Regents of State Colleges v. Roth, 408 U.S. 564, 577 (1992)). Property law has developed largely from unexamined notions that divisions of property rights should receive respect even though third parties often do not have an easy way to discover these divisions. Douglas G. Baird & Thomas H. Jackson, *Possession and Ownership: An Examination of the Scope of Article 9*, 35 STAN. L. REV. 175, 178 (1983).

^{13.} See generally Frank I. Michelman, Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law, 80 HARV. L. REV. 1165 (1967).

^{14.} See, e.g., 3 WILLIAM BLACKSTONE, COMMENTARIES *4 (conveniences, or creations

which courts will go in order to protect new interests and whether there is a line beyond which property rights and efficiency do not necessarily go hand in hand.

A. Early Property Right Issues

Early scholarly debates focused on the origin or source of property law. One school of thought perceived property rights as "positive law," descending from the sovereign and his courts. A second school of thought believed that such rights arose from the traditions and common customs of the community. The "positive law" position offered the advantages of administrative ease and stability: uniformity and regularity in application that is binding beyond the immediate community. Traditional property rights, recognized by advocates of the second position, were habits and methods derived from property owners as a group. These traditions are beneficial because they produce reduced reliance on the legal system as well as increased efficiency stemming from repeated transactions. Between these two positions, there was often no clear advantage to either and no compelling reason why one should prevail over the other. As with modern property rights debate, each position presented unique benefits.

The impact of these early stances on modern property disputes is evident despite the current economic emphasis.²⁰ Because the legal system assumes the predominate role in modern property rights alloca-

improving life, would not be devised unless the creator could keep them permanently); OLIVER WENDELL HOLMES, JR., THE COMMON LAW 354 (1938) (the idea that rights have value as property is almost identical with the notion that it may be turned into money by selling it); RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 11, 12 (1972) (in order for there to exist an efficient system of property, ownership of all resources, except those so plentiful that all may consume as much as they desire, must occur).

^{15.} Richard A. Epstein, International News Service v. Associated Press: Custom and Law as Sources of Property Rights in News, 78 Va. L. Rev. 85 (1992). For theorists advocating property rights by sovereign descent, see John Austin, The Province of Jurisprudence Determined (1832), reprinted in The Province of Jurisprudence 5-6 (Legal Classics Libr. ed., 1984); Thomas Hobbes, Leviathan 312 (C.B. MacPherson ed., Penguin Books 1968) (1651).

^{16.} Epstein, supra note 15, at 85-86.

^{17.} Epstein, supra note 15, at 86-87.

^{18.} Id. at 86. See United States v. Arredondo, 31 U.S. 691, 714 (1832) (stating that "there is [a] source of law in all governments, usage, custom, which is always presumed to have been adopted with the consent of those who may be affected by it"). See also First Victoria Nat'l Bank v. United States, 620 F.2d 1096, 1103 (5th Cir. 1980) (stating that "law or custom may create property rights where none were earlier thought to exist").

^{19.} See infra notes 131-216 and accompanying text.

^{20.} See infra notes 131-159 and accompanying text.

tion, courts confront numerous potential individual interests including customs and traditions arising within the community.²¹ The ensuing body of case law has generally favored the establishment of property rights.²²

Property rights jurisprudence was initially based upon constitutional principles and protected only traditional property interests. In the nineteenth century, it was commonly held that "explicit expropriation" of real property must be present before a compensable taking occurred. This was largely a result of the Supreme Court's decision in *Transportation Co. v. Chicago*, which denied takings compensation absent practical ouster of possession. In *Mugler v. Kansas*, the Court broadened this rationale, holding that a compensable taking did not occur when a state acted under its police power to restrict the use to which property could be put. Similarly, in *Pennoyer v. Neff*, the Court protected traditional property interests. In *Pennoyer*, the Court emphasized that in the event real property is taken without notice.

^{21.} Customary practice in modern society is characterized by repeat and reciprocal interactions between the same parties. Epstein, supra note 15, at 126. The establishment of property rights through custom, though not prevalent, is still present in recent opinions. See Nixon v. United States, 978 F.2d 1269, 1277-79 (D.C. Cir. 1992) (historical custom and usage creates a private property interest in presidential papers). Customary practices are also present in cases pertaining to news, intellectual property, or transactions involving a transferable interest such as the government privilege found in G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 902 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993). Cf. Stephen L. Carter, Custom, Adjudication, and Petrushevsky's Watch: Some Notes From the Intellectual Property Front, 78 VA. L. Rev. 129, 130-31 (1992) (emphasizing that while investigating custom has long been central to adjudicating disputes between private parties, courts should not find this wholly decisive because customs may be inefficient or interfere with broader state policies).

^{22.} See infra notes 23-130 and accompanying text.

^{23.} Michelman, supra note 13, at 1184. Governmental taking of property requires "just compensation" to the rightful owner. U.S. Const. amend. V.

^{24. 99} U.S. 635 (1878).

^{25.} Id. at 642. In Transportation Co., the city of Chicago built a tunnel under the Chicago River. Id. at 635. The excavation temporarily denied plaintiff use of his dock and required that he obtain the use of another dock. Id. at 636. The Court held that the city's action did not require compensation. Id. at 645.

^{26. 123} U.S. 623 (1887).

^{27.} Id. at 668. In Pennoyer, a Kansas statute prevented the plaintiff from using his property to produce alcoholic beverages. Id. at 624-25. The Court held that the prohibition was within the sphere of the state's police power and did not warrant just compensation. Id. at 668-69.

^{28. 95} U.S. 714 (1877).

procedural due process protections may be invoked.²⁰ These cases typified the traditional property interest required in order to receive constitutional protection in the nineteenth century. They also demonstrate how the Court delayed expansion of property right protections with its bright-line analysis of what constituted protected property.³⁰

Largely because of the judicial emphasis on traditional property rights, recognition of nonphysical property interests was extremely limited. In 1918, however, the Supreme Court, in *International News Service v. Associated Press (INS)*, set forth a position generally favoring creation of property interests beyond tangible real property:

If that which the complainant has acquired fairly at substantial cost may be sold fairly at substantial profit, a competitor who is misappropriating it for the purpose of disposing of it to his own profit and to the disadvantage of complainant cannot be heard to say that it is too fugitive or evanescent to be regarded as property.³³

The *INS* Court enjoined duplication of other news agencies' "fresh" stories, yet further provided the tort of misappropriation an enforcement mechanism. *INS* is therefore important in two ways: first, it established a property right in information—a nonphysical or intangible entity; and second, it created a tort that would provide the impetus for future intellectual property expansion. As the reach of misappropriation and similar torts has expanded, it has become more difficult for a third party to convert or unfairly profit from another's creation or idea. Accordingly, the *INS* holding is consistent with policy considerations that reward

^{29.} Id. at 741-43. The Court held that the Due Process Clause protected property located within a state even where the owner of such property was not a resident of the state in which the property was located. Id. at 743. The Due Process Clause provides that there will be no denial of property without due process of law. U.S. Const. amend. XIV. Later interpretations of substantive protections proscribed additional government interference and also provided protections to intangible rights, such as government benefits. See Peter N. Simon, Liberty and Property in the Supreme Court: A Defense of Roth and Perry, 71 Cal. L. Rev. 146, 148 (1983). See also infra notes 108-118 and accompanying text.

^{30.} For a thorough analysis of the origin and early jurisprudence of property law, see generally Scott Coval, et al., *The Foundations of Property and Property Law*, 45 CAMBRIDGE L.J. 457 (1986).

^{31.} The Supreme Court did recognize the existence of property rights in intangible items pursuant to the patent system. See Pennock v. Dialogue, 2 U.S. 1, 23-24 (1829) (holding that although patent interests are valid, petitioner's was not because he marketed it before he applied for the patent).

^{32. 248} U.S. 215 (1918).

^{33.} Id. at 240.

^{34.} Id. at 242.

^{35.} See, e.g., Douglas G. Baird, Common Law Intellectual Property and the Legacy of International News Service v. Associated Press, 50 U. CHI. L. REV. 411 (1983) (detailing the INS's role in the expanding tort and property actions protecting intangible interests).

creativity inasmuch as it protects the owner with some form of ownership.

B. Federal Preemption

Although *INS* indicated that breakthroughs in the rigid classification of property were imminent, fifty years passed before a steady trend recognizing new property rights developed. Federal preemption proved to be a major obstacle by preventing states from thoroughly protecting newly created interests. In *Sears*, *Roebuck & Co. v. Stiffel Co.*, the Supreme Court held that a state may not provide protection beyond what federal patent and copyright provisions allow. Strict preemption analysis was the response to state unfair competition law. The rationale was that state protection of interests representing too slight an advance to be patented would monopolize something that federal law considers belonging to the public. The response to the public.

The surge of property expansion could not begin until courts relaxed their rigid stance regarding preemption.⁴⁰ This began with *Goldstein v. California*,⁴¹ where the Supreme Court held that the Copyright Clause⁴²

^{36.} Preemption occurs when Congress explicitly preempts state law, when a federal scheme occupies a given field, thereby preempting state law in that field, or when compliance with both federal and state law is impossible. G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 903 (9th Cir. 1992) (citing California v. ARC America Corp., 490 U.S. 93, 100-01 (1989), cert. denied, 113 S. Ct. 2927 (1993)).

^{37. 376} U.S. 225 (1964).

^{38.} Id. at 232-33. Sears held that federal patent laws preempted a state law prohibiting the imitation of unpatented lamps. Id. at 233. The Court referred to James Madison's statement that states "cannot separately make effectual provision for either patents or copyrights." Id. at 228 (citing The Federalist No. 43 at 288 (Cook ed. 1961)). See also Compco Corp. v. Day-Bright Lighting, Inc., 376 U.S. 234, 237-38 (1964) (preempting state law preventing the imitation of unpatented light fixtures).

^{39.} Sears, 376 U.S. at 231-32.

^{40.} Early decisions excluded state protection that went beyond federal provisions. More recent decisions allow state protection that goes beyond protection afforded by federal laws provided there is no conflict with the federal laws. Compare Sears, 376 U.S. at 229 (state law infringing on the "area" of federal statutes must be set aside) with Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 165 (1989) (states may place limited regulations on unpatented innovation but may not "impermissibly interfere with the federal patent scheme").

^{41. 412} U.S. 546 (1973).

^{42.} The Copyright Clause of the Constitution secures "for limited times to authors and inventors the exclusive right to their respective writings and discoveries . . . " U.S. Const. art. I, § 8, cl. 8.

did not preempt a criminal provision prohibiting piracy of vocal recordings. 43 The Court stressed that the Copyright Clause could not be construed to vest the federal government with all-encompassing power to provide copyright protection.44 Thus, California's criminal provision, though beyond federal protection, was not unconstitutional.⁴⁵ Similarly, in Kewanee Oil Co. v. Bicron Corp., 46 the Court held that an Ohio trade secret law47 was not in conflict with federal patent protection even though such interests would not be eligible for patent protection. 46 Preemption, however, remains an obstacle for states as Bonito Boats, Inc. v. Thunder Craft Boats, Inc. 49 indicates. The Bonito Boats Court held that state regulation of intellectual property must yield where inconsistent with the federal patent scheme's balance between public right and private monopoly which was designed to promote creative activity.50 Kewanee Oil and Bonito Boats, though reaching different results, actually are not in conflict. Rather, they serve as examples of the change in preemption interpretation. State provisions may now protect interests left unattended by federal provisions provided an actual conflict with federal provisions does not exist.⁵¹ This allows the policy of rewarding creators while preventing unjust enrichment to outweigh allowances of copying to serve the public demand.⁵²

As presumption standards became judicially relaxed, "property" expanded to include the intangible areas of intellectual property such as

^{43.} Goldstein, 412 U.S. at 571. The criminal provision in question provided that every person is guilty of a misdemeanor that knowingly transfers any sound recorded on a phonograph record with intent to sell. CAL. PENAL CODE § 653h(a)(2) (West 1972).

^{44.} Goldstein, 412 U.S. at 553. To emphasize the type of changes modern causes of action have brought in a similar scenario, see Midler v. Ford Motor Co., 849 F.2d 460 (9th Cir. 1988) (providing a tort-based cause of action to a California recording artist whose voice was imitated in a commercial).

^{45.} Goldstein, 412 U.S. at 571.

^{46. 416} U.S. 470 (1974).

^{47.} The Ohio statute at issue provided protection to any "formula, pattern, device, or compilation of information . . . which gives . . . an opportunity to obtain an advantage over competitors." Ohio Rev. Code Ann. § 1333.51(C) (Supp. 1973).

^{48.} Kewanee Oil, 416 U.S. at 493. The Court reasoned that the federal patent law policy of encouraging invention was not disturbed by the existence of another form of incentive to invent, such as trade secret protection. Id. at 482-83. In this respect, the two systems were not in conflict. Id.

^{49. 489} U.S. 141 (1989).

^{50.} Id. at 167. In Bonito Boats, the Supreme Court held that a Florida law forbidding duplication of unpatented boat hull designs was preempted. Id. at 168. The Court stated that the statute conflicts with the "strong federal policy favoring free competition in ideas which do not merit patent protection." Id. (citing Lear, Inc. v. Adkins, 395 U.S. 653, 656 (1969)).

^{51.} Kewanee Oil, 416 U.S. at 482-83.

^{52.} See Gordon, supra note 2, at 151.

art, design, ideas, and information.⁶⁵ Thereafter, numerous protections evolved from private causes of action to heightened patent and copyright provisions.⁶⁴ Broadened constitutional protection against government deprivation buttressed the expanding definition of property.⁵⁶ Modernly, both of these areas become less separate, as evidenced by government interests permitting the use of intangible intellectual property.⁵⁶

C. Intellectual Property

Fairness to intellectual property creators combined with changes in the forms of wealth, caused by the dramatic growth of high-tech industries, is thought to have fueled the intellectual property expansion that later followed *INS*'s initial protection of an intangible interest.⁵⁷ This growth originated from two markedly different sources: federal statutory protection and state law. Federal protection of intellectual property is found in patent, copyright, and trademark statutes.⁵⁸ State protection evolved as state courts and federal courts interpreting state law substan-

⁵³ Id

^{54.} Misappropriation and unjust enrichment theories are the primary sources of protection in state courts. *Id.* at 152-56. *See infra* notes 79-94 and accompanying text.

^{55.} See Simon, supra note 29, at 149. See also infra notes 95-118 and accompanying text.

^{56.} See G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 902 (9th Cir. 1992) (permitting the use of an airplane modification pursuant to a regulatory permit), cert. denied, 113 S. Ct. 2927 (1993).

^{57.} Gordon, *supra* note 2, at 156-57. Intellectual property expansion has been rapid, ranging from judicial protections to legislative changes. *See, e.g.*, 17 U.S.C. §§ 302-305 (1988). In the trademark protection area, the "increased importance of symbolic identification in an age of visually oriented consumers" has contributed to expansion. Edmund W. Kitch, *Intellectual Property and the Common Law*, 78 VA. L. REV. 293, 294 (1992).

^{58.} The 1952 Patent Act governs patent law. 35 U.S.C. §§ 100-103 (1988). The Act protects new ideas or principles not yet known, allowing applicants to secure exclusive grants from the government to make, use, or sell an invention. Patents are valid for 17 years. 35 U.S.C. § 154 (1988). The 1909 Copyright Act provided for protection of literary property if notice was posted before a work's publication. Currently, the 1976 Copyright Act provides applicable copyright provisions without the notice requirement. 17 U.S.C. §§ 101-810 (1988). Copyrighted works are secure until 50 years after the author's death. 17 U.S.C.A. § 302(a) (1988). Trademark rights protect any word, name, symbol, or device distinguishing goods and last for 20 years, with the possibility of renewal. 15 U.S.C. §§ 1058-1059 (1988). The Trademark Act of 1946, also known as the Lanham Act, protects against false advertising. 15 U.S.C. § 1125 (1988).

tially expanded intellectual property protections through tort and property actions.⁵⁰

1. Federal Statutory Protection

Federal property right statutes granting protection through patent, copyright, or trademark are not of recent origin. In patent law, the classic theory advocating protection is the "reward" theory, which compensates creators for risks and expenses incurred. Copyright and trademark protections are partially premised on unjust enrichment, such as the belief that one should not reap where another has sown. As with expanding state tort and property actions resulting from a diminished adherence to federal preemption, recent judicial interpretation of federal statutes also indicates a broadened recognition of what constitutes property.

In Diamond v. Chakrabarty, 63 the Court held patentable the discovery of a new bacterium. 64 Yet 32 years earlier in Funk Bros. Seed Co. v. Kalo Inoculant Co., 65 the Court held that an innovative combination of rhizobia bacteria was not patentable. 66 Logically, an intellectual creation

^{59.} See infra notes 79-94 and accompanying text.

^{60.} See supra note 58. For an economic perspective of patent law, see Robert P. Merges, Commercial Success and Patent Standards: Economic Perspectives on Innovation, 76 Cal. L. Rev. 803 (1988). For trademark analysis, see William M. Landes and Richard A. Posner, Trademark Law: An Economic Perspective, 30 J.L. & Econ. 265 (1987). For the history of copyright protections, see Howard B. Abrahams, The Historic Foundation of American Copyright Law: Exploding the Myth of Common Law Copyright, 29 Wayne L. Rev. 1119 (1983). Although statutes affording these protections are well established, recent interpretation has expanded their reach in certain instances. See generally Lillian R. BeVier, Competitor Suits for False Advertising Under Section 43(a) of the Lanham Act: Some Puzzles in the Law of Deception, 78 Va. L. Rev. 1, 23 (1992) (asserting that the 43(a) cause of action has broadened, giving businesses greater ability to protect themselves against competitor advertising). See also Kitch, supra note 57, at 294 (stating that current relaxation of the standards of patent validity has made enforcement of patent rights easier).

^{61.} See JEREMY BENTHAM, A MANUAL OF POLITICAL ECONOMY, reprinted in 2 THE WORKS OF JEREMY BENTHAM 212-13 (John Bowring ed., 1962). The debated issue of the reward theory was whether the compensation should be in the form of payments or an exclusive privilege that protects against imitators. Id. For a discussion of a remarkable damage award based on patent infringement, see Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556 (Fed. Cir. 1986) (awarding nearly one billion dollars to Polaroid for patent infringement).

^{62.} See Gordon, supra note 2, at 156.

^{63. 447} U.S. 303 (1980).

^{64.} Id. at 313.

^{65. 333} U.S. 127 (1948).

^{66.} Id. at 130-31. The Court reasoned that a patent could not be based on product traits that are "the work of nature"; rather there must be more of an inventive ele-

should be more patentable than a new organism, which is essentially a discovery of nature. The inconsistency of these decisions is largely attributable to the expansion of intellectual property from 1948 to 1980 and the Court's changing response to this expansion. In San Francisco Arts and Athletics v. United States Olympic Committee, the Court upheld a statutory trademark property right in the word "Olympic," which had commercial and promotional value resulting from the United States Olympic Committee's expenses and efforts. Similarly, a broadened interpretation of federal copyright law is illustrated in West Publishing Co. v. Mead Data Central. In West Publishing Co., the Eighth Circuit affirmed a preliminary injunction barring Lexis, a Mead service, from crossciting page numbers from West, a competing legal service.

The expansion of property rights based on federal law, however, is much less dramatic than that based on state law and, in some instances, case law appears to check the expansion. In *Parker v. Flook*, ⁷² the Supreme Court affirmed the rationale of *Gottschalk v. Benson*, ⁷³ holding unpatentable an equation by which new values are combined with old to yield updated results. ⁷⁴ In *Feist Publications v. Rural Telephone Service Co.*, ⁷⁵ the Court held that a telephone company could not copyright the white pages of its directory. ⁷⁶ This holding placed a limit on the ability to copyright information—specifically noncreative factual compilations. ⁷⁷

ment to the product. Id. .

^{67.} Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 VA. L. REV. 305, 305-06 (1992). *See also* Stephen A. Bent et al., Intellectual Property Rights in Biotechnology Worldwide (1987) (applying traditional concepts of patent law to biotechnological subject matter).

^{68. 483} U.S. 522 (1987).

^{69.} Id. at 523.

^{70. 799} F.2d 1219 (8th Cir. 1980), cert. denied, 479 U.S. 1070 (1987).

^{71.} Id. at 1222. The Court held that West's layout of page numbers was part of its overall "arrangement," which the court believed took enough "labor, talent, and judgment" to warrant copy protection. Id. at 1226-27.

^{72. 437} U.S. 584 (1978).

^{73. 409} U.S. 63 (1972) (disallowing patent protection for an algorithm that converted binary-coded decimal numbers into pure binary numbers).

^{74.} This situation is analogous to the bacteria scenario held patentable in Diamond v. Chakrabarty, 447 U.S. 303 (1980). However, in this instance, the Court declined to expand the scope of patentable material when presented with an opportunity to do so. See supra notes 63-67 and accompanying text.

^{75. 111} S. Ct. 1282 (1991). See also Triangle Publications v. Knight Ridder Newspapers, 626 F.2d 1171 (5th Cir. 1980) (allowing publication of copyrighted material by a competitor for comparison purposes).

^{76.} Feist, 111 S. Ct. at 1297.

^{77.} Id. at 1290. Despite limiting copyright protection based on lack of originality in

Although not halting the flow of property expansion, these cases indicate a waning of federal property right expansion and emphasize the notion that state courts are the arena in which new property rights will be litigated. The courts are the arena in which new property rights will be litigated.

2. State Protection

State law provides the basis for most private causes of action that seek to protect intellectual property. Through numerous doctrines, including misappropriation, dilution, unjust enrichment, and conversion, both state and federal courts interpreting state law have circumvented preemption problems and rewarded innovators tort and property rights for their creations: This is partially because federal law often defines the right but provides no mechanism of private enforcement. In Cort v. Ash, the Supreme Court limited the common-law doctrine that violation of a statute entitled the injured party to redress his grievances through a private suit in federal court. The Court held that an implicit private remedy cannot be maintained if the statute does not expressly provide for one. Thus, state law should provide redress to the injured party. The Court's favoring of state law causes of action combined with the more lenient preemption interpretation led to vast state expansion of intellectual property.

factual information, *Feist* could actually have the end result of expanding property rights. Pursuant to *Feist*, this information is now outside the zone of federal protection, thereby enabling states to circumvent preemption and potentially include such information in its state-protected property categories. Gordon, *supra* note 2, at 155-56 n.21. The Court might reach a different result in West Publishing Co. v. Mead Data Central, 799 F.2d 1219 (8th Cir. 1980), *cert. denied*, 479 U.S. 1070 (1987) if it were decided today, because page numbers are facts, not creative thought. Gordon, *supra* note 2, at 274 n.471.

- 78. See Cort v. Ash, 422 U.S. 66 (1975), discussed infra notes 81-82 and accompanying text.
- 79. See supra notes 36-56 and accompanying text. The emergence of private causes of action in state forums arose because of state law's classification of property, which provided protection beyond that of federal law.
- 80. See supra notes 60-78 and accompanying text; G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 901-02 (9th Cir. 1992) (holding that there is no implied private right of action un the Federal Aviation Act), cert. denied, 113 S. Ct. 2927 (1993).
 - 81. 422 U.S. 66 (1974).
- 82. Id. at 78. The respondent in Cort alleged that a private claim for relief existed under 18 U.S.C. § 610 (1988), which prohibited corporations from making contributions or expenditures in connection with specified federal elections. Id. at 68. The Court held that a federal enforcement action may arise if: the person seeking enforcement was one the statute was primarily designed to protect; if legislative intent and the underlying purpose of the legislation indicated that such a right existed; and if the area was not already relegated to state law enforcement. Id. at 78.

In Zacchini v. Scripps-Howard Broadcasting Co., 83 the Supreme Court cited both incentive to creators and the need to deny unjust enrichment as justification for applying state law granting property protection against the unauthorized broadcast of a human cannonball act.84 Carpenter v. United States⁸⁵ extended the rationale of INS to protect information confidentially acquired by a newspaper or its reporters. 86 In Midler v. Ford Motor Co.,87 the Ninth Circuit granted a recording artist the right to prevent commercial imitation of her voice. 88 In City of Oakland v. Oakland Raiders, the California Supreme Court held that despite being an intangible interest, a property right exists in a football franchise and is potentially subject to state eminent domain laws.90 In Board of Trade of Chicago v. Dow Jones & Co., 91 the Illinois Court of Appeals held that Dow Jones, under a misappropriation theory, was entitled to forbid use of its average as a reference point in a futures trading contract. This holding was reached despite the fact that Dow had no direct competition in this case because it did not use its average in such a manner.92

^{83. 433} U.S. 562 (1977).

^{84.} Id. at 573-77.

^{85. 484} U.S. 19 (1987).

^{86.} Id. at 25. The Court held that a reporter's use of pre-publication information for personal profit violated mail and wire fraud statutes. Id. at 24. Preliminarily, however, the Court recognized a property interest in the information. Id. at 25.

^{87. 849} F.2d 460 (9th Cir. 1988).

^{88.} Id. at 463-64.

^{89. 646} P.2d 835 (Cal. 1982).

^{90.} Id. at 845. By granting a property right in the intangible subject, the Oakland Raiders football franchise, there was the potential for the Court to find a public use of the franchise, thus restricting the owner's property rights by denying him the right to relocate the franchise.

^{91. 456} N.E.2d 84 (Ill. 1983). Professor Gordon notes that splits among the circuits indicate the volatility in the area of state property protection law. Gordon, *supra* note 2, at 153 n.18. *Compare* Boston Professional Hockey Ass'n v. Dallas Cap and Emblem Mfg., 510 F.2d 1004, 1012 (5th Cir. 1974) (defendant's sale of team emblems could violate trademark laws even without a showing of consumer confusion about the source of the items), *cert. denied*, 423 U.S. 868 (1975) *with* Int'l Order of Job's Daughters v. Lindeburg & Co., 633 F.2d 912, 920 (9th Cir. 1980) (confusion of source or origin should be a prerequisite to plaintiff's suit), *cert. denied*, 425 U.S. 941 (1981). See also Rochelle C. Dreyfuss, *Expressive Genericity: Trademarks as Language in the Pepsi Generation*, 65 Notre Dame L. Rev. 397, 398-99 (1990) (courts commonly base trademark protection on impairment of the mark's value, rather than consumer confusion).

^{92.} Dow Jones, 456 N.E.2d at 90.

The expansion of state law property right protections has been wide-spread, resulting as much from the desire to protect new interests emerging in society as from preservation of the reap/sow principle. In addition, commentators contend that state intellectual property expansion is the result of scarcity of resources. Despite the emergence of new interests, the number of potential users may exceed the number of interests. In this situation, property rights become increasingly necessary to ensure efficient allocation and management of the limited resource. Because so many factors affect property determinations it is unlikely that any one model is precisely correct. Rather, they all contribute to the broadened state protections available today.

D. Constitutional Protections

Recent interpretations of mandatory government compensation of a rightful owner of a property interest also have contributed to heightened property right protection. Constitutional property rights are based on the Fifth and Fourteenth Amendments, which state respectively, that the government must justly compensate a private property owner whose property is seized for public use and that there will be no denial of property without due process of law. Constitutionally protected property generally falls into one of two categories: a pre-existing property interest taken or converted to public use or a governmentally created interest bestowed and subsequently withdrawn. In the first instance, the issue involves the Takings Clause of the Fifth Amendment; in the second, it involves Fourteenth Amendment Due Process property protections.

1. Fifth Amendment Takings

Early takings cases held that direct appropriation of real property must occur before triggering constitutional protections, but this evolved into

^{93.} See Gordon, supra note 2, at 156-57 (discussing the nature and underlying policy of this principle).

^{94.} Kitch, supra note 57, at 295 (citing Carol M. Rose, Energy and Efficiency in the Realignment of Common Law Water Rights, 19 J. LEGAL STUD. 261 (1990)). Under the rationale of property expansion, the result is an attempt to close off the amount of available information, thus shrinking the public domain. Id. at 295.

^{95.} See generally Simon, supra note 29; Reich, supra note 1; Michelman, supra note 13.

^{96.} U.S. CONST. amend. V. The Due Process Clause of the Fourteenth Amendment makes this applicable to the states. U.S. CONST. amend. XIV.

^{97.} U.S. CONST. amend. XIV. This provision is utilized in instances where protected government benefits are denied.

^{98.} Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886, 2892 (1992). See also Lawrence Blume and Daniel L. Rubinfeld, Compensation for Takings: An Economic

protection against both excessive regulation⁹⁰ and physical invasion.¹⁰⁰ The scope of compensable property in takings instances is further expanding. For instance, in *Loretto v. Teleprompter Manhattan CATV Corp.*,¹⁰¹ the Court declared that a per se taking exists when the government authorizes any permanent physical invasion of property.¹⁰² In *Loretto*, a New York law required that a landlord permit a cable television company to install its cable facilities upon his property.¹⁰³ The

Analysis, 72 Cal. L. Rev. 569, 569 (1984).

99. See Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922) (while property may be regulated to a certain extent, regulation that goes too far becomes a taking). This broadened the holding of the landmark case United States v. Gettysburg Railroad Co., 160 U.S. 668 (1896). Gettysburg set forth the position that would serve as the backbone of takings analysis: just compensation is required in all takings, regardless of the weight of the public interest. Id. at 679. Regulatory actions, however, are not deemed takings where the pre-taking owner's uses of the property were harmful or noxious to the public. See Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886, 2901 (1992) (defining harmful or noxious uses as those that are proscribed by existing rules or understandings).

100. See United States v. Causby, 328 U.S. 256, 264 (1946) (asserting that the taking of a landowner's interest may result from physical invasion of the air above his property). Widely divergent methods of determining when a taking occurred resulted in some confusion. Compare Batten v. United States, 306 F.2d 580, 585 (10th Cir. 1962) (airplanes must physically violate airspace above property before a taking can be found), cert. denied, 371 U.S. 955 (1963), with Martin v. Port of Seattle, 391 P.2d 540, 546 (Wash. 1964), cert. denied, 379 U.S. 989 (1965) (actual physical overflights are not necessary for recovery). Consequently, commentators have proposed numerous models to deal with this uncertainty in the area of takings. See generally Guido Calabresi & A. Douglas Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089 (1972) (proposing a method called the "cheapest cost avoider," which justifies compensation for takings in instances where the transaction cost is less than the savings resulting from the exchange); Michelman, supra note 13, at 1222-26 (proposing a utility analysis measuring takings by various factors and then justifying takings in instances when they are fair); Joseph L. Sax, Takings, Private Property, and Public Rights, 81 YALE L.J. 149, 166-69 (1971) (proposing a non-compensable "spillover" result when government's use of one land spills over and limits the use of another); Joseph L. Sax, Takings and the Police Power, 74 YALE L.J. 36, 54-58 (1964) (suggesting two types of government takings: first, a compensable enterprise action arising from government's participation in economic society; and, second, a non-compensable action, arising from the government's necessary allowance of only one of two conflicting private land uses). For an account of the different models proposed to deal with the uncertainty in this area, see Lawrence Berger, A Policy Analysis of the Taking Problem, 49 N.Y.U. L. Rev. 165. 166-95 (1974).

101. 458 U.S. 419 (1982).

102. Id. at 426.

103. Id. at 423 (citing N.Y. EXEC. LAW § 828(1) (McKinney Supp. 1981-1982)).

Court held that this invasion entitled the property owner to compensation despite taking up only one-and-one-half cubic feet of the property. In *Nixon v. United States*, 105 the D.C. Circuit held that a per se taking of personal property for Fifth Amendment purposes may exist. 106 In reaching this conclusion, the court determined that presidential papers are personal property by virtue of the history, custom, and usage of such papers. 107

2. Fourteenth Amendment Due Process

The Due Process Clause of the Fourteenth Amendment governs summary termination of government created and disbursed wealth or benefits. ¹⁰⁸ Government largess, or revenue, is distributed to citizens in a myriad of ways, including entitlements, benefits, jobs, and licenses. ¹⁰⁹ In a pair of 1972 cases, the Supreme Court announced the criteria to determine which forms of government largess constitute property. In *Board of Regents v. Roth* ¹¹⁰ and *Perry v. Sinderman*, ¹¹¹ the Court announced that state law will serve as the determinant upon which property decisions are based. ¹¹² Thus, states may determine which substantive inter-

^{104.} Id. at 438-41. Although the Court expressed no opinion regarding the amount of damages due, the taking was premised on the space taken, damage resulting from the installation, and potential costs of repairs and upkeep. Id. at 440, n.19. Moreover, the Court pointed out that its holding was very narrow, justifying findings of per se taking only in instances where permanent physical invasion occurs. Id. at 441. See also Yee v. City of Escondido, 112 S. Ct. 1522, 1528 (1992) (announcing that a rent control ordinance does not constitute a taking because it does not compel an owner to suffer physical occupation of his property); Federal Communications Comm'n v. Florida Power Co., 480 U.S. 245, 252-53 (1987) (holding that a taking did not occur where a tenant invited to stay at one rent remains at a lower regulated rent). These cases illustrate the narrow holding of Loretta, that is, that the per se takings doctrine does not extend to regulatory takings.

^{105. 978} F.2d 1269 (D.C. Cir. 1992).

^{106.} Id. at 1285. See generally, John J. Costonis, Presumptive and Per Se Takings: A Decisional Model for the Taking Issue, 58 N.Y.U. L. Rev. 465 (1987). If the Supreme Court fails to grant certiorari to or affirms Nixon, the ramifications from a property classification standpoint will be that the system of property allocation based on tradition and custom is still a viable means of property recognition and that a per se taking of personal property is recognized.

^{107.} Nixon, 978 F.2d at 1276-77.

^{108.} U.S. CONST. amend. XIV.

^{109.} See John E. Nowack & Ronald D. Rotunda, Constitutional Law § 13.5 (4th ed. 1991).

^{110. 408} U.S. 564 (1972).

^{111. 408} U.S. 593 (1972).

^{112.} Roth, 408 U.S. at 577; Perry, 408 U.S. at 602 n.7. For a discussion of the implications of Roth and Perry to takings analysis, see generally Simon, supra note 29.

ests are also property interests, however, federal courts will govern the due process proceedings required upon termination of the benefits.¹¹³

In *Armett v. Kennedy*, ¹¹⁴ the Supreme Court questioned, but did not overrule, the *Roth-Perry* approach. Justice Rehnquist, writing for a plurality, ¹¹⁵ found that a difference exists between discretionary and nondiscretionary benefits, with procedural due process afforded only to the latter. ¹¹⁶ Legislative procedure, however, could protect discretionary benefits. In *Armett*, legislative protection was available but was conditioned upon specific procedures to determine cause for federal employee dismissal. Thus, when a government employee was fired for making public statements accusing his supervisor of bribery, he was bound by the procedures set forth in the statute that granted his property interest in the first place. ¹¹⁷ Despite Justice Rehnquist's misgivings, and consistent with the *Roth/Perry* approach, governmentally derived wealth rapidly became an accepted form of property, with revocation of most benefits invoking procedural safeguards. ¹¹⁸

These constitutionally based decisions are important because as property interests for purposes of just compensation and due process broaden, the interests potentially reached by private state actions likewise broaden. As with the private evolution of state property rights, this expansion is indicative of the changing forms of wealth and value in society.

E. G.S. Rasmussen & Associates v. Kalitta Flying Service, Inc.

In G.S. Rasmussen & Associates v. Kalitta Flying Service, Inc., 119 the

^{113.} Perry, 408 U.S. at 602-03. Thus, whether unrenewed contracts of state university professors were unconstitutional deprivations of property turned on whether their expectations were sufficiently grounded in state law, and, if so, whether proper Fourteenth Amendment procedural protections were provided. Simon, *supra* note 29, at 151-53.

^{114. 416} U.S. 134, reh'g denied, 417 U.S. 977 (1974).

^{115.} Chief Justice Rehnquist and Justice Stewart joined in the plurality opinion. Justices Powell and Blackmun concurred and dissented in part. Justice White wrote a separated concurring and dissenting opinion. *Id.*

^{116.} Simon, supra note 29, at 155.

^{117.} Arnett, 416 U.S. at 137, 152-55.

^{118.} See Atkins v. Parker, 472 U.S. 115, 128 (1985) (finding a property right in food stamps); Cleveland Bd. of Educ. v. Loudermill, 470 U.S. 532, 547-48 (1985) (holding that a property right of a school district employee was violated when no pre-termination opportunity to respond was provided).

^{119. 958} F.2d 896 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993).

court squarely faced the product of the expanded regulatory state: property right protection issues regarding intellectual design as well as value derived from government regulation permitting the use of the design. Based on his innovation, Rasmussen obtained from the Federal Aviation Administration (FAA) a Supplemental Type Certificate (STC), which essentially certifies changes to existing aircraft design. Adlitta Flying Service subsequently copied the certification number of Rasmussen's design, modified its own planes accordingly, and neither applied to the FAA for its own privilege nor compensated Rasmussen. Under Kozinski, writing for the Ninth Circuit, found a property interest in the design and accompanying privilege by specifically looking to California's statutory scheme as well as case law. Accordingly, the Ninth Circuit determined that Kalitta's actions amounted to the conversion of an interest that belonged solely to Rasmussen.

The court in *Rasmussen* could have rested its property determination on one of two bases: intellectual design or governmental regulatory interest. ¹²⁵ Rasmussen's legal arguments were more firmly rooted in the for-

^{120.} Id. at 900-01. Patent agreements may alleviate litigation in the area of aircraft design by creating allowances for shared technologies. See generally George Bittlingmayer, Property Rights, Progress, and the Aircraft Patent Agreement, 31 J.L. & ECON. 227 (1988).

^{121.} Rasmussen, 958 F.2d at 899.

^{122.} Id. at 899-900. Kalitta actually typed Rasmussen's STC number on the appropriate line and used a photocopy of it on the certificate itself. Apparently the FAA has no requirement of an original because it certified Kalitta's modified plane as airworthy. Id. at 900.

^{123.} Id. at 902-03. "The ownership of a thing is the right of one or more persons to possess and use it to the exclusion of others [T]he thing of which there may be ownership is called property." Id. at 902 (quoting CAL. CIV. CODE § 654 (West 1982)). The court also refers to examples in California property law, including the "composition of an author, the good-will of a business, trade-marks and signs, and . . . rights created by statute." Id. at 902 (quoting CAL. CIV. CODE § 655 (West 1982)). The court further looked to pertinent case law. Id. See City of Oakland v. Oakland Raiders, 646 P.2d 835, 843-44 (Cal. 1982) (finding a property right in a professional football team); Golden v. State, 285 P.2d 49, 52-53 (Cal. 1955) (holding that a state liquor license is property, though issued to one specific person and transferrable to another); Roehm v. Orange County, 196 P.2d 550, 552 (Cal. 1948) (announcing that a license is a privilege between the licensor and licensee, but is a property interest between the licensee and a third party because it has value and may be sold); Johnston v. Twentieth Century-Fox Film Corp., 187 P.2d 474, 487 (Cal. 1947) (finding a property right in a book title); Yuba River Power Co. v. Nevada Irrigation Dist., 279 P. 128, 128 (Cal. 1929) (stating that property includes everything one can own and transfer to another); Terrace Water Co. v. San Antonio Light and Power Co., 82 P. 562, 562 (Cal. 1905) (finding a property right in electricity).

^{124.} Rasmussen, at 906-07.

^{125.} See supra notes 79-94, 108-18 and accompanying text.

mer.¹²⁶ Indeed, there was no state deprivation to trigger constitutional protections. Nonetheless, the result in *Rasmussen* granted a property interest in a government regulatory privilege. "That the interest in question is limited to obtaining a governmental privilege, and a federal one at that, does nothing to diminish its status as a property interest for purposes of state law."¹²⁷

Rasmussen tests the outer limits of an economic theory position that favors the establishment of property right protections. Such a theory would promote the view that Rasmussen's efforts, risk, and design need protection in order to encourage the very sort of creativity that first led him to make such a modification. He has howeledge like Rasmussen's is determined to be private property, the question becomes whether an important advance is excessively restricted from the realm of public knowledge, thereby reducing efficiency as well as retarding further advances in the same area by third parties? Further, does granting a property interest in a right bestowed by government regulation expand potential property categories beyond what is efficient to society? An examination of arguments both in favor of and opposed to property right expansion is necessary to make such determinations.

III. ECONOMIC THEORY AND PROPERTY RIGHT PROTECTION

Historically, economists have thought highly of property right progression.¹³¹ Sir William Blackstone recognized in the eighteenth century that incentive to devise conveniences or creations improving life would not be present if the creator could not subsequently enjoy the benefits of ownership.¹³² Beyond individual incentives of private ownership, soci-

^{126.} Rasmussen, 958 F.2d at 902.

^{127.} Id.

^{128.} See infra notes 131-59 and accompanying text.

^{129.} G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 900 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993).

^{130.} See infra notes 224-43 and accompanying text.

^{131.} See supra note 14 and accompanying text; for a thorough examination of economic issues pervasive in property law, see generally, BRUCE A. ACKERMAN, ECONOMIC FOUNDATIONS OF PROPERTY LAW (1975).

^{132. 3} WILLIAM BLACKSTONE, COMMENTARIES *4. Additionally, St. Thomas Aquinas wrote that private property is necessary in three respects: every person is more careful to procure for him or herself alone than for others, human affairs are conducted in a more orderly manner if each person has his or her own duties, and finally a more peaceful state is assured if each person is contented with his or her own. R. Schlatter, Private Property: The History of an Idea 35 (1951) (quoting

etal benefits are thought to include more efficient resource allocation¹³³ and prevention of the overuse of public goods.¹³⁴

A. Efficiency Maximization Through Property Rights

A majority of economic theorists adhere to the general principle favoring property right protections.¹³⁵ Judge Posner best states the classic economic position, writing that there are three criteria in an efficient system of property rights: universality, exclusivity, and transferability.¹³⁶ Universality refers to the belief that all resources, except those so plentiful that consumption is unlimited, should be owned or be capable of being owned by someone.¹³⁷ Exclusivity ensures that the owner, rather than a third party, will reap the benefits of her property.¹³⁸ Transferability provides property's highest value through voluntary exchange.¹³⁹

However, because a perfectly efficient system is not attainable, limitations to these principles have been adopted. Such limitations include eminent domain powers, incompatible uses, and limited duration rights present in patent and copyright law. 142

SUMMA THEOLOGICA, I-II, Q. 105, Art.2, BASIC WRITINGS OF ST. THOMAS).

^{133.} Robert H. Nelson, Private Rights to Government Actions: How Modern Property Rights Evolve, 1986 U. Ill. L. Rev. 361, 385 (1986).

^{134.} See, e.g., Garrett Hardin, The Tragedy of the Commons, 162 SCIENCE 1243 (1968), reprinted in Economic Foundations of Property Law, supra note 131, at 2 (1975).

^{135.} See RICHARD POSNER, ECONOMIC ANALYSIS OF LAW (1972); Hardin, supra note 134; George Stigler, The Theory of Economic Regulation, BELL J. ECON. & MGMT. SCI. 3, 4 (1971), reprinted in George Stigler, The Citizen and the State: Essays on Regulation 114, 116 (1975) (government regulation creates rights that are actually acquired and owned by the regulated industry thus increasing that industry's profit potential). See also supra note 14 and accompanying text.

^{136.} POSNER, supra note 14, at 11-13.

^{137.} Id. at 11-12.

^{138.} Id. at 12-13.

^{139.} Id. at 13.

^{140.} See supra notes 98-107 and accompanying text.

^{141.} The incompatible uses limitation can severely impact the exclusivity criteria. For example, consider factory smoke creating harmful effects on neighboring property. This situation limits the neighboring property owner's ability to exclude, yet may be allowed with damage compensation, taxes, or other means whereby the factory owner compensates the neighboring property owner. See R.H. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1, 1 (1960). Professor Coase advocates that harmful effects resulting from the use of one's property are factors of production, which should be considered rights. Id. at 44. Such costs of operation are necessary in various social arrangements, and changes in the social arrangement may produce more harm than the original effect. Id. at 43.

^{142.} See supra note 58.

Transaction costs are likely the greatest limitation to efficiency. Such costs include those expenses associated with transfer and distribution of goods, particularly when the parties or strategies associated with monopoly rights are numerous. Transaction costs may also result from pollution or even "competition among firms for the rents associated with innovative devices and ideas." Where such costs are high, complete rights to exclusion are likely to increase inefficiency. Despite these market limitations, economists believe that property protections are essential in placing interests in proper hands while encouraging the creation of new interests. 145

B. Adverse Effects of Failure to Recognize Property Rights

Economic theorists favoring the establishment of property rights bolster their position by relying on models which demonstrate the harmful effects caused by the failure to recognize and protect the changing wealth and value in society. The recognition of these models is particularly important in the realm of innovation, where costs such as failure risk and potential liability are justified only by the subse-

^{143.} Terry L. Anderson & Peter J. Hill, *The Race for Property Rights*, 33 J.L. & ECON. 177 (1990). Transaction costs are a widely recognized impediment to efficiency. *See* Miller v. Commissioner of Internal Revenue, 836 F.2d 1274, 1281 (10th Cir. 1988) (holding that in determining whether a party's actions were intended to generate a profit, a significant factor considered is the extent of the transaction costs). The costs of litigation that Rasmussen incurred to gain protection for his STC is another example of such transaction costs. *See generally* Evans v. Jeff D., 475 U.S. 717, 737, reh'g denied, 476 U.S. 1179 (1986).

^{144.} Posner, supra note 14, at 25. If a factory owner has an absolute right to exclusion and transaction costs are prohibitive, the factory owner has no incentive to reduce its pollution even though the cost of closing the factory may be less than the damage to the neighboring property owner. Id. For further transaction cost analysis, see Harold Demsetz, The Cost of Contracting, 82 Q.J. Econ. 33 (1968); George J. Stigler, Two Notes on the Coase Theorem, 99 YALE L.J. 631 (1989); Oliver E. Williamson, Note, Transaction-Cost Economics: The Governance of Contractual Relations, 22 J.L. & Econ. 233 (1979).

^{145.} Posner, supra note 14, at 32.

^{146.} See infra notes 150-59 and accompanying text.

^{147.} The risk of failure involves expenses incurred in a failed design.

^{148.} If a new design fails to perform as expected, the creator may be liable for consequential damages. For example, if one of Rasmussen's planes had crashed he "could be held liable for huge damage awards." G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 900 n.6 (9th Cir. 1992) (citing Elsworth v. Beech Aircraft Corp., 691 P.2d 630 (Cal. 1984), cert. denied, 113 S. Ct. 2927 (1993)). See generally Peter W. Huber, Liability: The Legal Revolution and its Consequences (1988).

quent benefit of private ownership.¹⁴⁹ The very basis of the intellectual property system—individual creativity—is undermined if parties who did not incur the costs of innovation are able to profit from it.

1. The "Free Rider" Problem

The "Free Rider" problem is specific to the creation of new goods. ¹⁵⁰ Free riders utilize technology created by others for their own economic benefit "without having invested the time, money and effort of creating it." ¹⁵¹ Thus, free riders create disincentives for the development of new goods. ¹⁵² A primary impetus of the intellectual property system is to avoid free riders. ¹⁵³ Creation of the intellectual property system, however, does not necessarily eliminate the free rider problem. Economic theory advocates that if the intellectual property system cannot expand to accommodate different types of interests such as the regulatory privilege afforded to Rasmussen's design, then the free rider problem is not avoided and innovation is, therefore, discouraged. ¹⁵⁴

2. The "Tragedy of the Commons"

The "Tragedy of the Commons" occurs when a property interest is open to the "commons," or any potential user.¹⁵⁵ As each user seeks to maximize his own gain, the property's limits are surpassed and waste results.¹⁵⁶ One individual alone may not be the sole cause of the decline in common resources. Rather, numerous parties' utilization of the re-

^{149.} Rasmussen, 958 F.2d at 900.

^{150.} Id. See generally, Donald I. Baker & Richard S. Sayler, U.S. Justice Department Patent-Antitrust Policy: The Hazards of Changing Policies and Distant Horizons (PLI Patents, Copyright, Trademarks, and Literary Property Course Handbook Series No. 339, 1992)

^{151.} Id.

^{152.} Id.

^{153.} See Harold Demsetz, Toward a Theory of Property Rights, 57 Am. Econ. Rev. 347, 359 (1967).

^{154.} See supra notes 131-45 and accompanying text. Some restrictions on patents, however, are justified. If two companies are working independently to develop a new type of product, and one company finishes a month before the other, that company may obtain a patent and render the other's work useless. This unjust result supports some limitations on the duration of patents. Posner, supra note 14, at 32-33. This is an area where courts must be careful to distinguish between a free rider and an actual innovator for purposes of state property protections.

^{155.} The model and title of this phenomena are found in Hardin, *supra* note 134, *reprinted* at 2. Professor Hardin's example of the tragedy of the commons is an open pasture upon which any herdsman may allow their cattle to graze. *Id.* at 4. As the number of cattle increases, the pasture decreases, leading to ruin. *Id.*

^{156.} Id. at 4.

source to the maximum extent possible leads to the deterioration.¹⁵⁷ Ironically, had these individuals been able to agree collectively on a different manner of allocation, they all would have been in a better position.¹⁵⁸

Although the tragedy of the commons model is more commonly applied to better-established resources, its validity in the area of innovation and creation is readily apparent. If the product of an innovator's work merely becomes part of the commons, usable by any interested party, waste results because successful entrepreneurs will be less likely to invest the energy, time, and money in the given field. Thus, the range of the commons is broad, encompassing not only land and environment, but also ideas and knowledge. Furthermore, wasting the commons may result not only from over-utilization of an existing resource, but also from diminishing the likelihood of a future resource in the realm of intellectual property.

C. Regulatory Interests and Economic Analysis

Activities and interests are increasingly becoming subject to expanding regulatory control.¹⁶⁰ This expansion results in governmentally bestowed licenses, privileges, and benefits. Pursuant to the economic model of property right expansion, as these regulatory schemes become more

^{157.} John A. Chiappinelli, Note, The Right to a Clean and Safe Environment: A Case for a Constitutional Amendment Recognizing Public Rights in Common Resources, 40 BUFF. L. Rev. 567, 579 (1992). Global environmental problems are often the subject of "tragedy of the commons" analysis. See also Robert E. Cattanach, Jr. & Peter V. O'Connor, Environmental Concerns Raised by the Canada-United States Free Trade Agreement, 18 WM. MITCHELL L. Rev. 461, 476 (1992) (comparing the acid rain problem to the "Tragedy of the Commons").

^{158.} See Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369, 1378 n.19, 1380 (D.C. Cir. 1977) (granting the Environmental Protection Agency flexibility in the structuring of pollution permits).

^{159.} G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 900 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993).

^{160.} See generally Richard A. Posner, Theories of Economic Regulation, 5 BELL J. ECON. & MGMT. Sci. 335 (1974); George J. Stigler, The Theory of Economic Regulation, 2 BELL J. ECON. & MGMT. Sci. 3 (1971). Regulation may occur on a federal or municipal level. Supervision of taxi franchising is a common example of municipal regulation, as well as a common source of litigation. See Mark A. Perry, Note, Municipal Supervision and State Action Antitrust Immunity, 57 U. Chi. L. Rev. 1413, 1425 & n.64 (1990).

prevalent and affect interests of greater value to the owner, property protections should be granted.¹⁶¹

It is a process of evolution by which rights bestowed by government regulation become privatized. In order for these rights to become privatized, governmental supervision of a given market must first occur. Governmental regulation occurs in numerous forms, such as regulation to clear the channels of use when demands for a resource grow large enough to congest the market. ¹⁶² Governmental regulation may also result from the need for government intervention to monitor the safety of an area, such as the aircraft design in *Rasmussen*. Regulation generally involves instituting a system of permits to users. ¹⁶³ These permits are inherently valuable in that they allow a market participant to engage in particular activities. If the regulatory process reaches a point where restrictions cease and rights of alienability are achieved, the process of privatization is complete. ¹⁶⁴

Government has four possible responses when it realizes that private rights to government actions are developing: eliminate the right, regulate transfer and sale, allow privatization but maintain the right to terminate the rights of users, or simply transfer the rights to private possessors as private property. Although property rights in regulatory interests have yet to be discussed as often as intellectual property or government benefits, advantages to granting property protections pursuant to the fourth option and economic theory are readily apparent. A market in which transfer is frictionless ensures that the party who most highly values a given piece of property will obtain it, which is advantageous to society since that party will likely use it in the most efficient manner. In addition, the right is usually obtained in a competition involving payments. These payments may involve effort and risk, as in *Rasmussen*,

^{161.} See supra notes 131-45 and accompanying text.

^{162.} Nelson, supra note 133, at 374.

^{163.} Id.

^{164.} Id. at 374-75. A property right is thought to be alienable to the extent that a transfer is permitted between a willing seller and buyer. Guido Calabresi & A. Douglas Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089, 1092 (1972).

^{165.} Nelson, supra note 133, at 380.

^{166.} Professors Calabresi and Melamed state that whether or not an entitlement becomes private depends primarily on economic efficiency. This demands that we choose the set of entitlements that leads to an allocation of resources that cannot be improved upon. This occurs when "further change would not so improve the condition of those who gained by it that they could compensate those who lost from it and still be better off than before." Calabresi & Melamed, *supra* note 164, at 1093-94. This is referred to as "Pareto-optimality." *Id.* at 1094.

^{167.} Nelson, supra note 133, at 381.

^{168.} POSNER, supra note 14, at 15. Whether payments are made directly to the

that may diminish if property right protections are not available, which would result in fewer and less spectacular innovations.

The Rasmussen court recognized Rasmussen's interest as "interesting and peculiar." 169 Yet the court also recognized that with the expansion of the regulatory state, such an interest may become more prevalent and not granting property protections may reinvigorate the age old problems of free riders and commons destruction. 170

IV. VIEWPOINTS OPPOSING PROPERTY EXPANSION

Arguments against property right expansion are numerous and attack the classic economic theory from a variety of angles. The justification for certain property being classified as inalienable, which essentially means that ownership is restricted to the extent that property becomes part of a broad public domain, is premised on diverse arguments ranging from the idea that originality is an unascertainable legal fiction¹⁷¹ to the belief that sometimes there is greater economic efficiency in the absence of unencumbered private ownership.¹⁷² Furthermore, without additions to the public domain, advancements of shared knowledge will not occur, which would result in limiting technological progression.¹⁷³ In addition, withholding property right protection is thought to be necessary in areas where the firm ideas of economic analysis do not fit, such as personal or human flourishing.¹⁷⁴ An examination of these proposed limitations of

regulating agency, as is the case in rights to broadcast frequencies, or indirectly through risk and effort, such costs will less likely be incurred if an unprotectable interest results.

^{169.} G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 900 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993).

^{170.} Id. See supra notes 150-59 and accompanying text.

^{171.} See Jessica Litman, The Public Domain, 39 EMORY L.J. 965, 966-67 (1990) (the premise of copyright protection, where the author is credited with bringing something new into the world, fails to consider the public domain of shared knowledge from which a new author transforms and combines what is already public).

^{172.} See Carol Rose, The Comedy of the Commons: Custom, Commerce, and Inherently Public Property, 53 U. Chi. L. Rev. 711, 719 (1986) (predictable instances of market failure will be resolved more efficiently in the hands of government rather than in the hands of numerous individual owners, which justifies a need for governmentally controlled public property); Susan Rose-Ackerman, Inalienability and the Theory of Property Rights, 85 COLUM. L. Rev. 931, 938-41 (1985) (recognizing that difficulties due to externalities, coordination, imperfections in information, and transaction costs may, in certain instances, justify market inalienability).

^{173.} See Gordon, supra note 2, at 157.

^{174.} Margaret Jane Radin, Market-Inalienability, 100 HARV. L. REV. 1849, 1937

property interests and alienability sheds light on the troubling question of property in the expanded regulatory state.

A. The Public Domain

There are differing ways to view the public domain. Essentially, it is the public ownership of property that is not privately owned by individuals or corporations or protected by intellectual property statutes.¹⁷⁵ It also is referred to as the "public's toll for conferring private property rights in works of authorship."¹⁷⁶ A more positive characterization of the public domain is the body of knowledge from which future innovators or creators may draw and further enhance that which is already available to society. The strongest arguments advocating inalienability stem from this viewpoint.¹⁷⁷

There are several ways that the public may acquire assets. The "public trust" theory states that the public has always had rights to the property in question.¹⁷⁸ This theory is customarily used in real property cases, such as waterfront access.¹⁷⁹ In intellectual property cases, the public domain may be regarded as having "trust" rights to undiscovered interests, which justifies public ownership at the time of discovery. According to the "custom" theory the public acquires property because it asserts a claim that is so old that there is no recollection of the ownership being different.¹⁸⁰ The "prescriptive" or dedicatory theory is available when "a period of public usage gives rise to an implied grant or gift from private owners."¹⁸¹ This theory may be appropriate with respect to intellectual

(1987) (market orientation and the economic arguments for its efficiency may at times be out of touch with personal elements of the non-ideal world). Professor Radin's concept of human flourishing includes personal circumstances as well as the pursuit of social ideals. *Id.* at 1852.

^{175.} BLACK'S LAW DICTIONARY 1229 (6th ed. 1990). See generally, David Lange, Recognizing the Public Domain, 44 LAW AND CONTEMP. PROBS. 245 (1981).

^{176.} Litman, supra note 171, at 967.

^{177.} See Gordon, supra note 2, at 157. Property may be owned but still be inalienable to the extent that limitations on transferability or use exist. In the instant context inalienability is complete as there is no individual ownership and, thus, no property right protections.

^{178.} Rose, supra note 172, at 714.

^{179.} See State v. Superior Ct., 625 P.2d 239, 249 (Cal. 1981) (granting a public right to inland waterfront property based on the public trust theory). See generally Jonathan M. Hoff, Comment, Public Beach Access Exactions: Extending the Public Trust Doctrine to Vindicate Public Rights, 28 UCLA L. REV. 1049 (1981).

^{180.} Rose, *supra* note 172, at 714. This theory is also utilized in beach front property cases. Customary public rights are also difficult to apply to intellectual property because the very nature of intellectual property involves something new, rather than something historic or traditional.

^{181.} Id.

creations: designs and innovations that are beneficial to and widely used by society could ultimately become public domain.

The concept of public domain is inherent to all arguments favoring diminished property protection. ¹⁸² Even if private protections to newly created interests are not granted, these interests must still lie somewhere, thus the increases in the public domain. The only limit on the extent of the public domain would be if government manages and regulates these property interests. ¹⁸³

B. Inefficiencies in Economic Efficiency

The contention that withholding property right protections in certain situations maximizes efficiency puts in question the very core of general economic theory.¹⁸⁴ Economic theory recognizes that a perfectly efficient market system will never be attained because of the inherent costs associated with production, exchange, and ownership.¹⁸⁵ Theories that try to achieve perfect economic efficiency attack these flaws in the market system and propose models that heighten resource production.

One theory that attempts to upgrade the market system's efficiency by limiting alienability is based on the potential destruction wrought by transaction costs.¹⁸⁶ These costs may be numerous and unanticipated, resulting from externalities,¹⁸⁷ problems in information, or coordination.¹⁸⁸ Where such costs are excessively high, inalienability rules would

^{182.} See generally Jessica Litman, The Public Domain, 39 EMORY L.J. 965 (1990).

^{183.} An example of this is found in government regulation of broadcast frequencies. POSNER, supra note 14, at 31. The law has not recognized property rights in broadcasting at all. Id. Comprehensive federal regulation governs an industry that would otherwise be wrought with property claims for rights to a particular frequency in a given area. Id. at 33-34. Such a market would be highly inefficient and largely unmanageable. Id. Regulation of the taxi industry in major cities is a similar example.

^{184.} See supra notes 131-59 and accompanying text (discussing the economic theory behind property right protection).

^{185.} See supra notes 140-44 and accompanying text (analyzing the relationship between transaction costs and decreased efficiency).

^{186.} See Rose-Ackerman, supra note 172, at 937. See also supra notes 143-44 and accompanying text.

^{187.} Richard A. Epstein, Why Restrain Alienation?, 85 COLUM. L. REV. 970, 990 (1985). Externalities are costs derived from sources not actually a part of the exchange. These include loss of gains resulting from misconduct or administrative costs resulting from external forces. Id. Justification for inalienability is found in the need to control "external harm and the common pool." Id.

^{188.} Rose-Ackerman, supra note 172, at 938.

require or forbid certain actions, rather than employ internal market corrections of price incentives or market processes.¹⁸⁹ These required actions would minimize personal market incentives, thus providing maximized output to the market as a whole rather than to each interested party.¹⁹⁰

Markets also tend to work inefficiently where numerous parties desire control over or access to an interest. These parties are often too many and their interests too small to gain recognition in market transactions. ¹⁹¹ This is referred to as the "common pool" problem, where the number of claimants and the extent of their interests are in indefinite proportions. ¹⁹² In this situation, government might manage the relative relationships among the parties by regulating costs associated with gaining an interest. ¹⁹³ Also, government may allocate a greater interest to a more productive party. ¹⁹⁴ This is already seen in collective goods such as the broadcast spectrum. ¹⁹⁵ This reflects the notion that there will be instances where the inefficiencies associated with disinterested management are less numerous than those associated with high transaction costs.

C. Advancing the Public Domain

When interests lie within the public domain, other parties may use, modify, and improve them. ¹⁹⁶ This use occurs without the burden of compensating the original creator. One model that advocates limiting property right protections and promotes advancement of an enlarged public domain contends that excessive protections quell further advancement on current innovation. ¹⁹⁷ Granting overly broad monopoly rights to previous innovators deters such improvement and retards the creation of

^{189.} *Id.* External corrections are limitations on transferability to or by particular parties. For example, a law may require owners to live on the land and develop it in order to perfect title. *Id.* at 940. Conversely, persons close to bankruptcy may be prevented from giving away particular assets. *Id.*

^{190.} Id. at 938.

^{191.} Rose, supra note 172, at 719.

^{192.} Epstein, supra note 187, at 978. Professor Epstein notes that strangers may create common pool problems by acting pursuant to custom or law. He also stated that individuals may create problems by acting pursuant to a consensual agreement. Id. at 979. A fitting example is the allocation of water rights where numerous parties on a given body of water assert individual interests in water use. Id.

^{193.} Rose, *supra* note 172, at 719. Rose emphasized that government might be the best manager of resources when individual parties have competing interests. *Id.*

^{194.} Id.

^{195.} Id. See also POSNER, supra note 14, at 31.

^{196.} Litman, supra note 182, at 965.

^{197.} Gordon, supra note 2, at 157.

new intellectual products.¹⁰⁸ The result is a diminished realm of new technology and a society unable to respond flexibly to new opportunity or danger.¹⁰⁹

Unjust enrichment theories, such as misappropriation, are a primary basis for protecting initial innovations. However, by limiting the public domain and consequently advances from it, these theories have the result of chilling creativity more than protecting it.²⁰⁰ The proposed solution to this dilemma lies in limiting the judge made protections for intellectual property and relying on federal protections.²⁰¹ This will result in more uniformity, and check the rapid expansion of state intellectual property protections.

D. Debunking Creativity

Intellectual protections credit an author with bringing something entirely "new into the world." These protections are limited to that aspect of the author's work that is actually new, with the rest falling into the public domain. Original intellectual property is a product of the creator's memories, experiences, inspirations, and influences. Copyright protections attempt a near impossible task: determining what is original from the vast array of public knowledge and protecting only the new creation. Description of the creation.

Currently, courts entertain an analysis of originality only when the party requesting protection recognizes use of a pre-existing work.²⁰⁶

^{198.} Id.

^{199.} Id.

^{200.} Id. at 277-78.

^{201.} Id. Professor Gordon contends that copyright, patent, and trademark laws likely provide adequate incentives to ensure the protection and growth of the intellectual property industry. Id. See supra note 57.

^{202.} Litman, supra note 171, at 967.

^{203.} Stewart v. Abend, 495 U.S. 207, 215 (1990) (stating that renewal rights in a copyrighted work are still present to successors after the death of the author); Litman, *supra* note 171, at 968.

^{204.} Litman, supra note 171, at 1007-08.

^{205.} Id. at 974-75. Professor Litman deals exclusively with copyright protections in her article, generally referring to authorship of written works. However, this theory is not limited to this analysis, as illustrated in *Rasmussen*. In obtaining his STC, Rasmussen drew on his general knowledge of aircraft, a portion of which was in the public domain.

^{206.} Stewart, 495 U.S. at 234-35. The Court pointed out that "[c]ompilations or abridgments, adaptions, arrangements, dramatizations, translations, or other versions of

Rather than grant such protections, which at best will apply in a hit and miss manner, this approach argues that society should recognize that these works bolster the public domain, without which new works would not exist.²⁰⁷ Accordingly, creativity becomes mere translation and recombination of a commons into which ages of ideas and innovations have gone.²⁰⁸

E. Human Flourishing and Cultural Property

One could argue that a shortcoming of economic analysis is its cold reliance on efficiency and its failure to consider human or cultural concerns. The "human flourishing" view argues that economic analysis is morally wrong when it is set forth as the "sole discourse of human life." Universal commodification contemplates a world market that is all-encompassing; one that is unable to coexist with crucial but abstract concepts like freedom and identity. Economic analysis consequently undermines these personal attributes by conceiving of relationships and philosophical and moral commitments as quantifiable and alienable. Consequently, alienability is justified to the extent that these abstract ideas are assimilated into the market.

Similar to the theory of human flourishing is the idea that grouphood expresses something about an entire group's relationship to certain property.²¹⁴ Cultural property, such as historical objects or some kinds of

works" in the public domain are granted copyright protection only of the duration and scope of the already existing protected portion. *Id. See also* Gracen v. Bradford Exch., 698 F.2d 300 (7th Cir. 1983) (holding plaintiff's work insufficiently original to meet copyright requirements).

^{207.} See Litman, supra note 171, at 1023.

^{208.} Id. at 966.

^{209.} Radin, supra note 174, at 1851. For Professor Radin's introduction of this concept, see Margaret J. Radin, Property and Personhood, 34 STAN. L. REV. 957 (1982) [hereinafter Property and Personhood].

^{210.} Radin, supra note 174, at 1859. See also Frank I. Michelman, Ethics, Economics, and the Law of Property, in Ethics, Economics, and the Law: Nomos XXIV 3 (J. Roland Pennock & John W. Chapman eds., 1982) (arguing that it is impossible for everything of value to be owned and/or sold).

^{211.} Radin, supra note 174, at 1903.

^{212.} Id. at 1905. Examples of this are prostitution, surrogacy, and the sale of babies. See also Elizabeth M. Landes & Richard A. Posner, The Economics of the Baby Shortage, 7 J. LEGAL STUD. 323 (1978); J. Robert S. Prichard, A Market for Babies?, 34 U. TORONTO L. J. 341 (1984). The clash between commodification and personhood occurs when property becomes so closely bound up with our individual identities that its loss "causes pain that cannot be relieved by the object's replacement." Property and Personhood, supra note 209, at 959.

^{213.} Radin, supra note 174, at 1937.

^{214.} John Moustakas, Group Rights in Cultural Property: Justifying Strict Inalienability, 74 CORNELL L. REV. 1179, 1184 (1989). See generally Joseph L. Sax, Is Any-

art, can be vital to the preservation and advancement of group identity and self-esteem.²¹⁵ The cultural property approach differentiates between fungible goods and property, and advocates that raw economic analysis not apply to such "group" interests.²¹⁶

F. Regulatory Interests and Alienability Limitations

Arguments favoring a limitation on the expansion of property right protections reject the overly broad economic model that favors creation of property right protections to almost any interest that can be owned.²¹⁷ While these arguments are valid in some instances, such as imposing efficiency limitations in an unregulated broadcasting market,²¹⁸ their worth as a replacement for the general economic position is slight.

Supporters advocating inalienability based on human and cultural property propose areas where economic analysis is inappropriate. Prostitution, baby sale, and some art and historical objects may fall within such "public" or "individual" interests. Phowever, the existence of valid exceptions does not justify replacing the economic model because these areas reflect only a small percentage of the changing interests in society. Similarly, the argument that creativity is a legal fiction may be applicable in some areas of written work, but should not prevent protection of technological advance, even if recombined prior

one Minding Stonehenge? The Origins of Cultural Property Protection in England, 78 Cal., L. Rev. 1543, 1554-56 (1990) (exploring the origins of English cultural property law and society's collective historical interest).

^{215.} Moustakas, supra note 214, at 1185.

^{216.} Id.

^{217.} See Radin, supra note 174, at 1851; Rose, supra note 172, at 715-16; Rose-Ackerman, supra note 172, at 932.

^{218.} See supra note 183. For a critical analysis of theories directly conflicting with the economic model, see *infra* notes 231-39 and accompanying text.

^{219.} See Moustakas, supra note 214, at 1186; Radin, supra note 174, at 1905. See also supra notes 209-16 and accompanying text.

^{220.} Radin, supra note 174, at 1852.

^{221.} In Professor Radin's model of human flourishing, *supra* notes 209-13 and accompanying text, inalienability is pursued as a "method of correcting market failures," rather than a replacement to the market. Radin, *supra* note 174, at 1851. Most "new" property interests are a result of the replacement of industrial and manufacturing sectors with high tech information industries. Gordon, *supra* note 2, at 156. This has resulted in the United States being the world's largest exporter of copyrighted works. *Id.* at 156-57 and n.25 (quoting MARSHALL A. LEAFFER, UNDERSTANDING COPYRIGHT LAW § 12.5 (1989)).

^{222.} See supra notes 202-08 and accompanying text.

technologies are the source. Where there is the capacity to do something that was not present before, something new exists.²²³

In a regulatory context, the issue is whether governmentally created interests fall into one of the areas where alienability may properly be limited or whether the general economic approach is appropriate. To make this determination, one must explore the underlying arguments.

V. ISSUE RESOLUTION AND A PROPOSED MODEL

Economic theory and justifiable inalienability are generally viewed as diametrically opposed. How could models proposing ownership for all but the most plentiful of goods coexist with models advocating government control of a market or the growth of the public domain? Certainly there are distinct differences between these theories in both analysis of interests and allocation of protections.²²⁴ These theories, however, do not have differing ideals; both strive to procure what is best from a societal standpoint. Thus, particularized models may be formulated in a given area of potential property right protection that can answer to theories on either side of the economic barrier. It is within the *Rasmussen* context—intellectual property and regulatory privilege—that this task is undertaken.

A. Is the Expansion of Property Right Protections an Economically Necessary Supplement to Newly Created Interests?

This Comment concludes that society should afford property right protection to regulatory interests stemming from intellectual design.²²⁵ As regulation of economic markets increases, property right questions regarding resulting interests increase.²²⁶ Despite necessary intervention in areas ranging from telecommunications and broadcasting to public health and safety, dire consequences may result if government supervision cursorily undermines a free enterprise market.²²⁷ Technological progression

^{223.} See infra notes 240-43 and accompanying text (proposing a model to measure intellectual property protection).

^{224.} See supra notes 131-223 and accompanying text.

^{225.} Rasmussen's airplane modification has value and use only pursuant to a regulatory scheme. G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 900-01 (1992), cert. denied, 113 S. Ct. 2927 (1993). The creativity and innovation necessary to such design should receive protection.

^{226.} See generally Earnest Gellhorn & Richard J. Pierce, Jr., Regulated Industries in a Nutshell (2d ed. 1987); Louis B. Schwartz et al., Free Enterprise and Economic Organization: Government Regulation (6th ed. 1985) (examining government regulation of industry and the market system).

^{227.} See Paul Stephen Dempsey, Market Failure and Regulatory Failure As Catalysts for Political Change: The Choice Between Imperfect Regulation and Imperfect

depends on individual creation and innovation.²²⁸ Limitations on property rights will not diminish the sources of creativity, but will raise the cost of innovation to a prohibitive level. To ensure continued technological advance, society must establish a method of compensation for risks taken, costs or losses incurred, and potential litigation costs.²²⁹

The hybrid combination of intellectual creation and government regulation must receive property right protection. If not, there will be little to convert and less to regulate. Where the impetus to create becomes vulnerable due to regulation or public ownership, technological progression mandates following the economic model to the extent it provides incentive through protection of intellectual creation. This rationale does not diminish when innovation acquires the stamp of regulation.²³⁰

Once property right protection is granted, additional issues arise. The duration of the protection is of particular importance. With regard to this issue, theories limiting property right protections become relevant and helpful. Where compelling reasons for bolstering the public domain exist, a permanent monopoly for the creator may not be feasible. The duration of the protection will vary according to the relevant factors unique to the interest. The issue of whether the courts or the legislature should determine protections and duration also arises. While lawmakers have the right to govern such protections, application becomes difficult because of the varying interests emerging in society. Courts are in a better position to evaluate interests as they evolve and, thus, should have some latitude in making property right protection determinations. The most difficult aspect of newly created interests is that they do not fall neatly in a particular area, and instead must be considered individually, in terms of whether they warrant protection and for what duration.

Competition, 46 WASH. & LEE. L. REV. 1, 23-25 (1989) (advocating public policy considerations instead of heavy-handed regulation in finding a middle ground between excessive government direction and competitive capitalism).

^{228.} Rasmussen, 958 F.2d at 900.

 $^{229.\} Id.$ This idea occupies an essential place in economic theory. See supra notes 135-59 and accompanying text.

^{230.} Rasmussen, 958 F.2d at 900. A product of intellectual creation, these interests need protection in order to ensure future creativity.

B. Are Limitations to Property Right Protections or Alienability Necessary to Achieve Maximum Resource Allocation Efficiency or to Ensure that Property Rights Co-exist With Other Societal Interests?

The best argument in rebuttal to the conclusion that property right protection should apply to regulatory interests stemming from intellectual design is that further advancement of innovation will not occur if the initial work is protected. Although implications for future development are certainly present, this becomes a question of which work came first. Incentive to advance technology is worthless if the initial innovations are never created. Therefore, mechanisms must ensure the existence of initial innovations before consideration of further development. Once this occurs, protections of future designers that do not directly encroach the rights associated with the initial design may be considered. 222

Proposals that address the inefficiencies inherent in free markets, and suggest correction through governmentally required actions or inactions, foretell trouble. In all likelihood these proposals will create more inefficiencies than they eliminate.²²³ Of course, regulation remains unavoidable in certain areas, such as the broadcast area.²²⁴ But rather than resulting in maximized efficiency, as its proponents suggest,²³⁵ limiting alienability through government control results in new interests. Subsequently acquired by the regulated industry, these new interests give rise to entirely new property right issues.²³⁶ *Rasmussen* clearly presents this fact.²³⁷

^{231.} See Gordon, supra note 2, at 157.

^{232.} For example, utilization of protected technology for the purpose of advancement, as opposed to the direct conversion present in *Rasmussen*, may provide an allowable enterprise. Should there be a significant advancement undermining the value of the initial creation, a system of comparative apportionment should be implemented with deference to the initial creator. Such deference results from greater value to society which the initial innovator provides; without the initial creator, the second creator does not exist.

^{233.} For example, if restricting transferability because of excessive transaction costs, the means by which property arrives in the hands of the party that will best utilize it vanishes. Monitored leaseholds could provide a temporary solution. Posner, *supra* note 14, at 13 n.8. However, this creates more efficiency limitations through necessary compliance with the leasehold scheme and termination and renewal transaction costs.

^{234.} Id. at 13.

^{235.} See supra notes 184-95 and accompanying text.

^{236.} Stigler, *supra* note 135, at 4. Whether creating a property right or not, regulation involves permits and privileges distributed to and acquired by the participants in the regulated area.

^{237.} See supra notes 119-30 and accompanying text.

Although economic theory provides the best model by which decisions regarding the increasing number of government interests are made, theories advocating withholding property right protections point out appropriate trouble spots and aid in their resolution. In certain instances of inevitable regulation, these theories make the market better able to utilize gains in efficiency and minimize loss. In addition, concerns regarding the advancement of protected innovation aid in creating provisions protecting third-party creativity, yet minimizing losses of the original creator. Finally, they may aid in determining the duration of the protection.

C. Proposed Model Protecting Innovation-Based Regulatory Privilege

Interests utilizing regulatory privilege as well as products of intellectual creation embody unique legal entities, involving state intellectual property law, federal statutes, and government regulation. Compelling arguments exist for protecting such interests beyond federal provisions, ²⁴⁰ yet courts must be careful to ensure that overbroad criteria for protections are not implemented and that only actual innovation is rewarded. A two-pronged analysis should be implemented. First, property right protection should be provided only upon showing *measurable scientific or technological advances* resulting directly from the design or innovation. Second, the standard measuring such an advance should ask whether society now has the capacity to do something that it could not have done prior to the innovation. ²⁴¹ In other words, an independently created right to government regulation does not exist. When granting such regulation pursuant to an individually created societal or techno-

^{238.} See supra note 217-23 and accompanying text.

^{239.} Necessary regulation of the broadcast spectrum and taxi use typify this reasoning. See supra note 183 and accompanying text.

^{240.} The Rasmussen court decided against private enforcement of federal protection, thus requiring the utilization of state law. In Cort v. Ash, 422 U.S. 66 (1975), discussed at supra notes 81-82 and accompanying text, determining whether a private action exists pursuant to a federal statute requires examining furtherance or hindrance of congressional objectives. Id. at 78. This may be a difficult standard when applied to regulation. G.S. Rasmussen & Assocs. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 902 (9th Cir. 1992), cert. denied, 113 S. Ct. 2927 (1993).

^{241.} The burden here rests on the party claiming protection, which is a logical allocation based on the familiarity the party will have with the technological area and their ability to best enlighten the court. Once meeting this burden, along with individual state requirements regarding property rights, there arises a rebuttable presumption of a new technological benefit.

logical advance, however, property right protections go with the innovation, even if it enters the increasing sphere of government regulation. The property rights obtained are not rights to receive such a privilege from the government, but rather to protect such a privilege from conversion after receipt.

Pursuant to this Comment's model, the Ninth Circuit reached the correct conclusion in *Rasmussen*.²⁴² By showing that plans modified pursuant to his design additions could carry more weight than originally thought, Rasmussen demonstrated that society can now do something it previously could not.²⁴³ Thus, a measurable technological advance existed which warranted protection pursuant to state intellectual property law.

This model does not intend to replace state provisions for intellectual property protection. It does propose a workable standard for dealing with intellectual property falling within a regulatory scheme. Equally important, however, this Comment attempts to illustrate the increasing complexity that interests will exhibit as technical advances comprise a growing percentage of societal interest and value. Each potential interest will exhibit its own individual characteristics. Solutions will necessarily entail consideration of economic theory as well as proposals limiting property right protection.

VI. CONCLUSION

Property right protection of regulatory privilege based on intellectual creation embodies the economic solution to competing forces: the individual goal to create and obtain interests and their rents, and government's regulation of particular markets. As society witnesses the continuing evolution of economic resources and commodities, the tension between these forces builds. Failure to grant property right protection to resources that reflect individual creation or design will, in all practicality, facilitate conversion.²⁴⁴ This results in a deteriorated level

^{242.} The Rasmussen court based its decision on the determination that Rasmussen's government privilege was capable of precise definition, exclusive possession or control, and that Rasmussen had a legitimate claim to exclusivity. Rasmussen, 958 F.2d at 903. This is not inconsistent with this Comment's model, which proposes to aid in determining whether a claimant has a legitimate claim to exclusivity.

^{243.} Id. at 899. Based on "hundreds of hours of engineering work," Rasmussen showed that with the addition of three instrument gauges and an additional flight manual, DC-8 airplanes could carry more cargo weight than previously thought. Id. See also supra notes 119-30 and accompanying text. See also WILLIAM KINGSTON, DIRECT PROTECTION OF INNOVATION 1-34 (William Kingston ed., 1987) (proposing property rights vest only upon introduction of a new product on the market).

of technological achievement.

Each regulated industry produces a unique interest, thereby precluding a bright line test to govern decisions regarding property right protections. However, examining arguments both for and against individual ownership helps resolve each scenario's difficulties. Intellectual property interests which fall within the purview of government regulation must be protected to secure efforts at future technology in similarly regulated areas. Thus, it becomes essential to afford protection to interests that reflect direct scientific or technological advance. Property right protection may not provide the solution to every regulatory scenario. For Rasmussen and similar creators, however, property right protection is a necessary resolution to an issue that is becoming increasingly prevalent as the regulatory state expands.

J. MILES HANISEE