INTELLECTUAL PROPERTY, INNOVATION, AND SOCIAL PROGRESS: THE CASE AGAINST INCENTIVE BASED ARGUMENTS*

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> No one can doubt, that the convention for the distinction of property, and for the stability of possession, is of all circumstances the most necessary to the establishment of human society, and that after the agreement for the fixing and observing of this rule, there remains little or nothing to be done towards settling a perfect harmony and concord.
>
> David Hume, *Treatise of Human Nature*[2]

I. INTRODUCTION

Modern times have been marked by what may be described as an intellectual property land grab. Recently there has been an alarming rush to patent human DNA.[3] In particular, what is patented are partial DNA sequence ESTs (expressed sequence tags) that serve to distinguish one gene from another.[4] Celera Corporation filed preliminary patents for 6500 partial DNA sequences.[5] Several other companies followed suit.[6]

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[2] DAVID HUME, A TREATISE OF HUMAN NATURE (1739), *reprinted in* HUME'S MORAL AND POLITICAL PHILOSOPHY 61 (Henry D. Aiken ed., Hafner Publ'g Co. 1948).

[3] *See* James Meek, *Why You Are First in the Great Gene Race: The Rush for Rights to Your Body Is Under Way and Already Patents Have Been Applied for on a Fantastic 127,000 Bits of Your Genes,* GUARDIAN SPECIAL SUPPLEMENT 4 (Nov. 15, 2000).

[4] For an in-depth analysis of many of the issues that surround patenting ESTs, see Molly A. Holman & Steven R. Munzer, *Intellectual Property Rights in Genes and Gene Fragments: A Registration Solution for Expressed Sequence Tags*, 85 IOWA L. REV. 735 (2000).

[5] *See This Week on Science Friday: Patenting DNA* (National Public Radio broadcast, Oct. 29, 1999), http://www.sciencefriday.com/pages/1999/Oct/hour1_102999.html. A preliminary patent allows the owner a year to decide if the intellectual work in question is worth patenting. *See* 35 U.S.C. § 111(b) (2000) (describing provisional patent applications).

International treaties like the World Trade Organization's TRIPS (Trade Related Aspects of Intellectual Property) agreement have provided intellectual property holders with mechanisms to protect their holdings worldwide.[7] Those countries that resist signing these treaties are excluded from profitable markets and are thus forced to consent to a Western model. Books, movies, plays, music, and processes of manufacture are now protected worldwide.

Government and corporate data mining activities have produced massive information data files on most U.S. citizens. In the name of security or better profits, sensitive personal information is held, sold, and traded as intangible property. Moreover individuals have little control over these activities. In the area of personal information control, it seems as if we are moving into an age of transparency.

While these examples may be alarming, some people claim that systems of intangible property protection are necessary. Within the Anglo-American tradition, systems of intangible property protection are justified because these models are supposed to bring about social progress. When compared to other sorts of models governing the creation, use, and control of intangible works, the system employed by the United States produces more social utility – or so it is claimed. It is in the name of social progress that the U.S. Constitution empowers the federal government to protect intellectual property. "The Congress shall have the Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[8]

After a brief introduction to the subject matter of intellectual property, an internal and external critique of Anglo-American systems of intellectual property protection will be offered.[9] Internally, it will be argued that incentive-based social progress justifications for intellectual property fail – alas, if we are to conduct a cost benefit analysis it appears that a different model or a different set of rights would be better than our current system.[10] Social progress incentive-based arguments do not justify current copyright, patent, and trade secret models of intellectual property protection. Moreover, even if these arguments could be modified, they would seem to require

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[6] For example, Athersys, Inc. and Human Genome Sciences, Inc. have also filed for preliminary patents. *See* Reuters Online Service, *Company Says It Filed 10,000 Gene Patents* (Feb. 16, 2000), *at* http://www.netlink.de/gen/Zeitung/2000/000216.html.

[7] *See* Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, April 15, 1994, Annex IC: Agreement on Trade-Related Aspects of Intellectual Property Rights, *reprinted in* THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 321 (World Trade Org. ed., Cambridge Univ. Press 1999). *See also* Marci Hamilton, *The TRIPS Agreement: Imperialistic, Outdated, and Overprotective*, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 243 (Adam D. Moore ed., 1997).

[8] U.S. CONST. art. I, § 8, cl. 1, 8.

[9] *See infra* notes 28-113 and accompanying text.

[10] *See infra* notes 28-94 and accompanying text.

allowances for multiple patents for the "same" intangible work, not patent monopolies. Externally, it will be argued that consequentialism[11] – more specifically, rule-utilitarianism – is beset with numerous seemingly insurmountable difficulties and cannot provide an adequate foundation for intellectual property.[12] If the internal or external arguments succeed, then we will have to either find a different justification or abandon systems of intellectual property protection altogether.[13]

A. What Is Intellectual Property?[14]

Intellectual property is generally characterized as non-physical property that is the product of cognitive processes and whose value is based upon some idea or collection of ideas.[15] Typically, rights do not surround the abstract non-physical entity, or *res*, of intellectual property; rather, intellectual property rights surround the control of physical manifestations or expressions. Systems of intellectual property protect rights to ideas[16] by protecting rights to produce and control physical embodiments of those ideas. On this view, intellectual property is non-tangible property that takes the form of abstract types, designs, patterns, ideas, or collections of ideas. Intellectual property rights are rights that surround control of the physical manifestations or tokens of the idea(s).

Within the Anglo-American tradition, intellectual property is protected by the legal regimes of copyright, patent, and trade secret.[17] Copyright protection extends to original works of authorship fixed in any tangible medium of expression.[18] Works that may be copyrighted include

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[11] In brief, consequentialist moral theories hold that actions or policies are justified if and only if they lead to the best consequences.

[12] *See infra* notes 93-113 and accompanying text.

[13] *See infra* notes 28-113 and accompanying text.

[14] Intellectual property falls under the umbrella of intangible property — both are rights to types, not tokens. Rights to tokens yield control over a specific item like a car or DVD player while rights to types yield control over a set of ideas no matter how those ideas are instantiated. Intangible property is a broader notion including lists of customers, purchasing summaries, medical records, criminal records, and the like.

[15] For a similar view, see Justin Hughes, *The Philosophy of Intellectual Property*, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 107 (Adam Moore ed., 1997).

[16] In this article, the term "idea" is construed loosely to mean theories, abstract designs, and theoretical constructs.

[17] Trademark and the law of ideas, two areas of law with significant overlap into the realm of intellectual property, will not be discussed.

[18] *See* 17 U.S.C. § 102 (1988). The three major restrictions on the bundle of rights that surround copyright are fair use, *see* 17 U.S.C. § 107 (1988), New Era Publ'ns Int'l v. Henry Holt and Co., 695 F. Supp. 1493 (S.D.N.Y. 1988), limited duration, 17 U.S.C. § 302 (1988), and the first sale rule, 17 U.S.C. § 109(a) (1988). The first sale rule prevents a copyright holder who has sold copies of the protected work from later interfering with the subsequent sale of those copies. 17 U.S.C. § 109(a). It should also be noted that copyright protection does not exclude independent original creation — for example, if an author

literary, musical, artistic, photographic, and cinematographic works, maps, architectural works, and computer software.[19] There are five exclusive rights that copyright owners enjoy and three major restrictions on the bundle. The five rights are the right to reproduce the work, the right to adapt it or derive other works from it, the right to distribute copies of the work, the right to display the work publicly, and the right to perform it publicly.[20] Each of these rights may be parsed out and sold separately. All five rights lapse after the lifetime of the author plus 70 years — or in the case of works for hire, the term is set at 95 years from publication or 120 years from creation, whichever comes first.[21]

The domain or subject matter of patent protection is the invention and discovery of new and useful processes, machines, articles of manufacture, or compositions of matter.[22] Patents yield the strongest form of protection in that a twenty-year exclusive monopoly is granted over any expression or implementation of the protected work.[23] The bundle of rights conferred on patent owners are the right to make, the right to use, the right to sell, and the right to authorize others to sell the patented item.[24] Moreover, the bundle of rights conferred by a patent exclude others from making, using, or selling the invention regardless of independent creation.

A trade secret may consist of any formula, pattern, device, or compilation of information that is used in one's business.[25] Trade secrecy laws rely entirely on private measures, rather than state action, to maintain exclusivity. Furthermore, the subject matter of trade secret is almost

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independently creates a work that is substantially similar to a copyrighted expression, he can obtain copyright protection. *See* 17 U.S.C. § 106 (1976).

[19] The Copyright Act was amended in 1988 to include computer software. *See* 17 U.S.C. § 102 (1988).

[20] 17 U.S.C. § 106 (1988).

[21] The Constitution requires the limited term of copyright and patent. The Constitution empowers Congress to "promote the Progress of Science and useful Arts, by securing *for limited Times* to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8 (emphasis added).

[22] *See* 35 U.S.C. § 154 (1984 & Supp. 1989). Patents may be granted when the subject matter satisfies the criteria of utility, novelty, and non-obviousness. *See* 35 U.S.C. §§ 101-105 (2000). Unlike copyright, patent law protects the totality of the idea, expression, and implementation. *See* 35 U.S.C. §§ 101-105.

[23] Patent Act, 35 U.S.C. § 101 (1988). The 1994 version of the Patent Act has added three years to the term of patent protection — from seventeen to twenty. *See* 35 U.S.C. § 154(a)(2) (1994).

[24] *See* 35 U.S.C. § 154.

[25] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 39-45 (1995) (setting forth the most current information about the law of trade secrets). The two major restrictions on the domain of trade secrets are the requirements of secrecy and competitive advantage. Although trade secret rights have no built-in sunset, they are extremely limited in one important respect. Owners of trade secrets have exclusive rights to make use of the secret but only as long as the secret is maintained. If the secret is made public by the owner, then trade secret protection lapses and anyone can make use of it. Moreover, owners' rights do not exclude independent invention or discovery.

unlimited in terms of the content of the information that is potentially subject to protection.[26] Within the secrecy requirement, owners of trade secrets enjoy management rights and are protected from misappropriation.[27]

II. UTILITARIAN INCENTIVE-BASED ARGUMENTS FOR INTELLECTUAL PROPERTY: THE INTERNAL CRITIQUE

Anglo-American systems of intellectual property are typically justified on utilitarian grounds.[28] The Constitution grants limited rights to authors and inventors of intellectual property "to promote the Progress of Science and useful Arts."[29] Beginning with the first Patent Act of 1790 and continuing through the adoption of the Berne Convention Standards in 1989, the basis given for Anglo-American systems of intellectual property has been utilitarian in nature, and not grounded in the natural rights of the author or inventor.[30] Thomas Jefferson, a central figure in the formation of American systems of intellectual property, expressly rejected any natural rights foundation for granting control to authors and inventors over their intellectual work.[31]

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[26] *Id.*

[27] *Id.*

[28] *See* 1909 Copyright Act, H.R. REP. NO. 60-2222, at 7 (1909). The courts have also reflected this theme: "The copyright law . . . makes reward to the owner a secondary consideration." United States v. Paramount Pictures, 334 U.S. 131, 158 (1948).

> The limited scope of the copyright holder's statutory monopoly, like the limited copyright duration required by the Constitution, reflects a balance of competing claims upon the public interest: Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and other arts.

Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1974).

[29] U.S. CONST. art. I, § 8, cl. 8.

[30] This view is echoed in the following denial of a common law right to intellectual property: "Wheaton established as a bedrock principle of American copyright law that copyright, with respect to a published work, is a creature of statute and not the product of the common law." W. HALPERN ET AL., COPYRIGHT: CASES AND MATERIALS 6 (1992). The General Court of Massachusetts (1641) adopted the following provision: "There shall be no monopolies granted or allowed among us, but of such new inventions as are profitable to the country, and that for a short time." ANTHONY WILLIAM DELLER, DELLER'S WALKER ON PATENTS § 7, at 51-57 (2d ed. 1964). Chief Justice Taney wrote: "The monopoly did not exist at common law, and the rights, therefore, which may be exercised under it cannot be regulated by the rule of common law. It is created by the act of Congress; and no rights can be acquired in it unless authorized by statute, and in the manner the statute prescribes." Gayler et al. v. Wilder, 51 U.S. (10 How.) 476, 493 (1850). *See also* Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417, 431 (1984); Wheaton v. Peters, 33 U.S. (8 Pet.) 591, 660-61 (1834); Graham v. John Deere Co., 383 U.S. 1, 9 (1966).

[31] Jefferson wrote: "The patent monopoly was not designed to secure the inventor his natural right in his discoveries. Rather, it was a reward, and inducement, to bring forth new knowledge." WILLIAM H. FRANCIS & ROBERT C. COLLINS, CASES AND MATERIALS ON PATENT LAW 92 (4th ed. 1995) (quoting Thomas Jefferson). Prior to the framing of the U.S. Constitution, a number of states adopted copyright laws that had both a utilitarian component and a natural rights component. A major turning point away from a natural rights framework

Society seeks to maximize utility in the form of scientific and cultural progress by granting rights to authors and inventors as an incentive toward such progress. In general, patents, copyrights, and trade secrets are devices, created by statute, to prevent the diffusion of information before the author or inventor has recovered profit adequate to induce such investment. This view is echoed by the committee report that accompanied the 1909 Copyright Act:

> In enacting a copyright law Congress must consider . . . two questions: First, how much will the legislation stimulate the producer and so benefit the public, and, second, how much will the monopoly granted be detrimental to the public? The granting of such exclusive rights, under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly.[32]

The justification typically given for Anglo-American systems of intellectual property "'is that by slowing down the diffusion of technical progress . . . it ensures that there will be more progress to diffuse.'"[33] Moreover, utilitarian-based justifications of intellectual property are elegantly simple. Control is granted to authors and inventors of intellectual property because granting such control provides incentives necessary for social progress. Coupled with the theoretical claim that society ought to maximize social utility, we arrive at a simple, yet powerful, argument.

A. A GENERAL OVERVIEW OF UTILITARIAN THEORY[34]

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for American institutions of intellectual property came with the 1834 decision of Wheaton v. Peters, 33 U.S. (8 Pet.) 591. *See* THORVALD SOLBERG, COPYRIGHT ENACTMENTS OF THE UNITED STATES, 1783-1906, COPYRIGHT OFFICE BULLETIN NO. 3, at 14 (2d ed. 1906). "Unquestionably, the 1834 decision marked an important turning-point, in that it distanced American copyright law from the natural law perspectives which were very much in evidence at the end of the eighteenth century." Alain Strowel, *Droit d'Auteur and Copyright: Between History and Nature*, *in* OF AUTHORS AND ORIGINS: ESSAYS ON COPYRIGHT LAW 235, 244 (Brad Sherman & Alain Strowel eds., 1994); Edward C. Walterscheid, *Inherent or Created Rights: Early Views on the Intellectual Property Clause*, 19 HAMLINE L. REV. 81 (1995). Nevertheless, anomalies still pop up. "In 1984 the Supreme Court cited Locke when it held that intangible 'products of an individual's labor and invention' can be 'property' subject to the protection of the Takings Clause." Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1540 (1993) (citing Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1002-03 (1984)).

[32] H.R. REP. NO. 60-2222, at 7 (1909) (quoted in *Sony Corp.*, 464 U.S. at 430 n. 10).

[33] DOROTHY NELKIN, SCIENCE AS INTELLECTUAL PROPERTY: WHO CONTROLS RESEARCH? 15 (1984) (quoting JOAN ROBINSON, THE ACCUMULATION OF CAPITAL 87 (1956)).

[34] Parts of this section draw directly from R.G. Frey, *Introduction: Utilitarianism and Persons*, *in* UTILITY AND RIGHTS 3-19 (R.G. Frey ed., 1984) and J.J.C. Smart, *Extreme and Restricted Utilitarianism*, *in* THEORIES OF ETHICS 171-83 (Philippa Foot ed., 1967).

"Utilitarianism" is not a single theory, but rather a cluster of theories that center around the following three components:

i. the consequent component — the rightness of actions is determined by the consequences;

ii. the value component — the goodness or badness of consequences is to be evaluated by means of some standard of intrinsic value;

iii. the range component — it is the consequences of an act (or class of actions) as affecting everyone, and not just the agent himself, that are to be considered in determining rightness.

This way of characterizing utilitarianism is purposefully ambiguous between act-utilitarianism and rule-utilitarianism depending on the notion of "action" used in (i) and (iii).

Act-utilitarianism is a theory which holds that an individual act is morally right if, and only if, it produces at least as much utility as any alternative action when the utility of all is counted equally. For example, classical act-utilitarianism is the view that individual acts are right or wrong solely in virtue of the goodness or badness of their consequences. The value component is identified in terms of pleasure and pain, and the range or scope of the theory touches everyone affected by an act. Modern utilitarians have generally rejected the crude hedonistic account of value in favor of an interest satisfaction view. For our purposes, a precise utilitarian account of value will not be needed and thus "utility" will be used as a blanket term to stand for that which is intrinsically good.

Act-utilitarians view rules that govern behavior as mere "rules of thumb"[35] that serve as helpful guides when there is no time to calculate the probable consequences of our actions or when personal biases cloud judgment.[36] The rightness or wrongness of following some rule on a particular occasion depends only on the goodness or badness of the consequences of keeping or breaking the rule on that particular occasion. If the goodness of the consequences of breaking the rule is greater than the goodness of the consequences of keeping it, then we must abandon the rule. On this view, rules may serve as useful guides, but when it is clear that following them leads to bad consequences, then we must break the rule.

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[35] Some utilitarians use "strategic rules" and "rules of thumb." Strategic rules are rules that we are almost always more confident in than our calculating abilities. Utilitarians of this sort argue that we should follow the strategic rule even when it looks like violating it will maximize goodness. But when we have strong evidence that breaking a rule in a certain instance will maximize utility, then we should break the rule.

[36] For similar views, see J.J.C. Smart, *supra* note 34, and DAVID LYONS, FORMS AND LIMITS OF UTILITARIANISM (1965).

If granting an author or inventor limited rights over what she produces maximizes net utility for everyone affected by the act, then intellectual property rights have been justified on act-utilitarian grounds. But, it should be obvious that this is not an accurate model of how intellectual property rights are justified within Anglo-American systems. Individual acts of conferring rights to each author and inventor are not tested to see if they will maximize overall expected utility for everyone affected. Moreover, the rules that comprise Anglo-American systems of intellectual property are not taken as mere rules of thumb. Even in cases where it is known beforehand that conferring rights to an inventor will lead to bad consequences, intellectual property rights are granted none-the-less. This point is echoed by Joan Robinson:

> Since it is rooted in a contradiction [long term benefits versus short term incentives], there can be no such thing as an ideally beneficial patent system, and it is bound to produce negative results in particular instances, impeding progress unnecessarily even if its general effect is favorable on balance.[37]

Anglo-American systems of intellectual property recognize and protect ownership claims even when such claims clearly do not yield gains in social utility.

Rule-utilitarians hold that moral rules are more than just rules of thumb that are to be broken when following them produces less utility than some other act. For the rule-utilitarian, the rightness of an act is not to be judged by comparing its consequences to the consequences of alternative acts, but only by considering whether or not it falls under a correct moral rule. Rules themselves are judged by considering the consequences of everyone following the rule.[38] If adopting a rule, set of rules, or institution maximizes net utility for everyone affected, then the rule, set of rules, or institution is morally justified. Generally, actions are to be judged in reference to rules and rules in reference to the consequences. The only time particular acts are tested directly is when there is no rule which covers the act or when two rules conflict.

In terms of "justification," modern Anglo-American systems of intellectual property are easily modeled as rule-utilitarian.[39] Typically, it is

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[37] NELKIN, *supra* note 33, at 15.

[38] This kind of rule-utilitarianism is sometimes called "ideal rule-utilitarianism." For a lucid account of the many forms of utilitarianism, see LYONS, *supra* note 36, and Joel Feinberg, *The Forms and Limits of Utilitarianism*, PHIL. REV. 368 (1967) (reviewing DAVID LYONS, THE FORMS AND LIMITS OF UTILITARIANISM (1965)).

[39] *See generally* S. Chesterfield Oppenheim, *A New Approach to Evaluation of the American Patent System*, 33 J. PAT. OFF. SOC'Y 555 (1951); NAT'L PATENT PLANNING COMM'N, FIRST REP. 783-84 (1943); REPORT OF THE PRESIDENT'S COMM'N ON THE PATENT SYSTEM, TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS IN AN AGE OF EXPLODING TECHNOLOGY (1966); Tom Palmer, *Intellectual Property: A Non-Posnerian Law and*

argued that adopting the systems of copyright, patent, and trade secret leads to an optimal amount of intellectual works being produced and a corresponding optimal amount of social utility. These systems or institutions are not comprised of mere rules of thumb. In particular cases, conferring rights on authors and inventors over their intellectual products may lead to bad consequences. Justification, in terms of social progress, occurs at the level of the system or institution. William C. Robinson concludes that the institution of patent protection is fully justified because, in general, adopting such a system leads to good consequences for society as a whole:

> The granting of a patent privilege at once accomplishes three important objects; it rewards the inventor for his skill and labor; it stimulates him, as well as others, to still further efforts in the same or different fields; it secures to the public an immediate knowledge of the character and scope of the invention. Each of these objects, with its consequences, is a public good, and tends directly to the advancement of the useful arts and sciences.[40]

Granting a copyright to Smith and Jones, for example, may not maximize overall social utility, but the system as a whole may yield a better outcome when compared to other systems.

B. THE INCENTIVES ARGUMENT

Given that intellectual works can be held by everyone at the same time, cannot be used up or easily destroyed, and are necessary for many lifelong goals and projects, it would seem that we have a prima facie case

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Economics Approach, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 179 (Adam D. Moore ed., 1997); Tom G. Palmer, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects*, 13 HARV. J.L & PUB. POL'Y 817 (1990); Leonard G. Boonin, *The University, Scientific Research, and the Ownership of Knowledge*, *in* OWNING SCIENTIFIC AND TECHNICAL INFORMATION: VALUE AND ETHICAL ISSUES 253, 257-60 (1989); Edwin C. Hettinger, *Justifying Intellectual Property*, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 17, 30-33 (Adam D. Moore ed., 1997); David Carey, The Ethics of Software Ownership (1989) (unpublished Ph.D. dissertation, Univ. of Pittsburgh) (on file with author); Arthur Kuflik, *Moral Foundations of Intellectual Property Rights*, *in* OWNING SCIENTIFIC AND TECHNICAL INFORMATION: VALUE AND ETHICAL ISSUES 219 (Vivian Weil & John W. Snapper eds., 1989); Ejan Mackaay, *Economic Incentives in Markets for Information and Innovation*, 13 HARV. J.L. & PUB. POL'Y 867 (1990); Roger E. Meiners & Robert J. Staaf, *Patents, Copyrights, and Trademarks: Property or Monopoly?*, 13 HARV. J.L. & PUB. POL'Y 911 (1990); Patrick Croskery, *Institutional Utilitarianism and Intellectual Property*, 68 CHI.-KENT L. REV. 631 (1993); William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325 (1989); FRITZ MACHLUP, THE PRODUCTION AND DISTRIBUTION OF KNOWLEDGE IN THE UNITED STATES (1962).

[40] WILLIAM C. ROBINSON, TREATISE ON THE LAW OF PATENTS FOR INVENTIONS § 33 (1890). Robinson is considered by many to be the foremost early authority on American systems of intellectual property.

against regimes of intellectual property that would restrict such maximal use. Tangible property, including concrete expressions of intellectual works, is subject to exclusive physical domination in a way that intellectual or intangible property is not. For example, Smith's use of a car excludes my concurrent use, whereas his use of a theory, process of manufacture, or recipe for success, does not. Thus, intellectual works can be seen as non-rivalrous commodities. If this is true, we have an immediate prima facie case against rule-utilitarian justifications of intellectual property rights.[41]

The rejoinder, typically given, is that granting rights to use, possession, and control of both ideas and expressions of ideas is necessary as an incentive for the production of intellectual works. Ideas themselves may be independently valuable, but when use, possession (in some cases), and control are restricted in a free market environment, the value of certain ideas increases dramatically. Moreover, with increased value comes increased incentives, or so it is argued.[42]

On this view, a necessary condition for promoting the creation of valuable intellectual works is granting limited rights to authors and inventors. "Without the copyright, patent, and trade secret property protections, adequate incentives for the creation of a socially optimal output of intellectual products would not exist."[43] Absent certain guarantees, authors and inventors would not engage in producing intellectual property. Although success is not ensured by granting rights, failure certainly is if others who incur no investment costs can seize and produce the intellectual effort of others. Generally, under conditions of non-protection it would be in a company's interest to let others create products and then merely reverse engineer the product, thereby forgoing investment and research costs. In this case, social progress slows, and overall social utility suffers.[44]

Many rule-utilitarians argue that private ownership of *physical* goods is justified because of the tragedy of the commons or problems with efficiency. Systems of private property are more efficient, or so it is argued, than systems of common ownership. It should be clear that this argument is based on providing incentives. Owners of physical goods are given an incentive to maintain or increase the value of those goods, because the costs of waste, and the like, are internalized. It is commonly argued that in the case of physical goods, granting rights generates incentives to efficiently use those goods, and this policy thereby optimizes social utility.

The incentives-based rule-utilitarian argument for systems of intellectual property protection is very similar. In this case, the government grants rights as an incentive for the production of intellectual works, and rule-utilitarians argue that production of this sort, in turn, maximizes social progress. It is important to note that, on this view, rights are granted to

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41 Hettinger, *supra* note 39.

42 *Id.*

43 Hettinger, *supra* note 39, at 30.

44 *See, e.g.*, *supra* note 39.

authors and inventors, not because they deserve such rights or have mixed their labor in an appropriate way, but because this is the only way to ensure that an optimal amount of intellectual products will be available for society. A more formal way to characterize this argument is:

> *Premise 1*. Society ought to adopt a system or institution if and only if it leads to or, given our best estimates, is expected to lead to the maximization of overall social utility.[45]
>
> *Premise 2*. A system or institution that confers limited rights on authors and inventors over what they produce is expected to serve as incentive for the production of intellectual works.
>
> *Premise 3*. Promoting the creation and dissemination of intellectual works produces an optimal amount of social progress.
>
> *Conclusion 4*. Therefore, a system of intellectual property should be adopted.

The first premise, or the theoretical premise, is supported by rule-utilitarian arguments that link theories of the good and theories of the right in a particular way. The rule-utilitarian determines a correct moral rule in reference to the consequences of everyone adopting it. By adhering to a rule-based component, it is argued that the problems that face act-utilitarianism,

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[45] This premise could be defended by the act-utilitarian in the following way. Consider the adoption of an institution of intellectual property protection as an *act* of congress or government. Members of congress, in voting to adopt some set of rules, are acting so that social utility is maximized — they are adopting a set of rules and attaching sanctions for violating these rules. The sanctions change the consequences of many actions and thus may change what is the correct action for others.

This way of defending the first premise of the argument is not without problems. While such a view would provide a way to sidestep an external critique of rule-utilitarianism, it would not answer any of the internal problems discussed. Moreover, it is not as if, by moving from rule-utilitarianism to act-utilitarianism, the defender of this view obtains firmer footing — alas, there are many damaging criticisms of act-utilitarianism as well. For a lucid account of many of the problems with act-utilitarianism and rule-utilitarianism, see Bernard Williams, *A Critique of Utilitarianism*, *in* UTILITARIANISM: FOR AND AGAINST 75 (1973); JOHN RAWLS, A THEORY OF JUSTICE 22-34 (1971); H.J. McCoskey, *Respect for Human Moral Rights Versus Maximizing Good*, *in* UTILITY AND RIGHTS 121 (R.G. Frey ed., 1984); DAVID LYONS, FORMS AND LIMITS OF UTILITARIANISM (1965); ROBERT NOZICK, ANARCHY, STATE, AND UTOPIA (1974); J.J.C. Smart, *Extreme and Restricted Utilitarianism*, *in* THEORIES OF ETHICS 171 (Philippa Foot ed., 1967); RICHARD B. BRANDT, ETHICAL THEORY: THE PROBLEMS OF NORMATIVE AND CRITICAL ETHICS 396-400 (1959); Richard B. Brandt, *Toward a Credible Form of Utilitarianism*, *in* MORALITY AND THE LANGUAGE OF CONDUCT 107 (Hector-Neri Castaneda & George Nakhnikian, eds., 1963); MACHLUP, *supra* note 39.

problems of justice,[46] special obligations,[47] integrity,[48] and excessive demands,[49] are circumvented.[50] Moreover, by grounding the theory solely in a consequent component, unlike deontic theories, rule-utilitarians argue that the theory is given firm footing. In combining the most promising aspect of act-utilitarianism (consequences are all that matter) with the most promising aspect of deontology (its rule-following component), rule-utilitarians hope to arrive at a defensible moral theory.

The second premise is an empirical claim supported by the aforementioned considerations concerning incentives. The view is that it is empirical fact that authors and inventors will not engage in the appropriate activity unless certain guarantees are in place.[51] What keeps authors and inventors burning the midnight oil, and thereby producing an optimal amount of intellectual works, is the promise of massive profits. The arguments supporting the third premise claim that cultural, technological, and industrial progress is necessary for an optimal amount of social utility.[52] It follows that a system of intellectual property should be adopted.

C. PROBLEMS FOR THE INCENTIVE ARGUMENT

Putting aside general attacks leveled at rule-utilitarianism which will be considered in Part III,[53] a serious challenge may be raised by questioning the truth of the second premise (hereinafter "P2"). It will be argued that P2 is false or at least highly contentious, and even in granting the truth of the first

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[46] Generally speaking, the problem of justice for act-utilitarianism is whether doing something unjust maximizes overall utility. For example, what if framing an innocent person would lead to the best consequences for everyone affected? Act-utilitarianism would seem to require such an unjust act, i.e. we would have a moral obligation to frame the innocent person, and this seems wrong.

[47] The problem of special obligations is that sometimes we have obligations that stand independent of the consequences. For example, it may be best for all concerned that a teacher give everyone A's, but the teacher has a special obligation to award grades based on merit.

[48] In general terms, the problem of integrity is that act-utilitarianism requires individuals to treat their own life-long goals and projects impartially. As a good utility maximizer we each should be willing to abandon our goals and projects for the sake of maximizing overall social utility. The problem is that we cannot be impartial in this way.

[49] The problem of excessive demands is that act-utilitarianism demands too much of us. Since everything we do and allow has consequences, it follows that every action or inaction is moral or immoral. But this seems wrong. Whether I wake up at 10:00 a.m. or 10:05 a.m. seems to be outside the realm of morality, assuming of course that I have no prior obligations.

[50] For a more precise account of the aforementioned problems, see SAMUEL SCHEFFLER, THE REJECTION OF CONSEQUENTIALISM: A PHILOSOPHICAL INVESTIGATION OF THE CONSIDERATIONS UNDERLYING RIVAL MORAL CONCEPTIONS (1994), and sources cited *supra* note 45.

[51] *See*, *e.g.*, *supra* note 39.

[52] For example, consider the advances in medical treatment that are seemingly the result of incentive-producing structures.

[53] *See infra* notes 95-113 and accompanying text.

and third premises, the conclusion does not follow.[54] Given that the truth of P2 rests on providing incentives, what is needed are cases that illustrate better ways, or equally good ways, of stimulating production without granting private property rights to authors and inventors. It would be preferable to establish equally powerful incentives for the production of intellectual property that did not also require initial restricted use guaranteed by rights. Furthermore, even if P2 is assumed true, the resulting system of intellectual property would be markedly different from Anglo-American systems of copyright, patent, and trade secret.

D. ALTERNATIVES TO PATENTS

One alternative to granting patent rights to inventors as incentives is government support of intellectual labor. This would result in government-funded research projects, with the results immediately becoming public property. It is obvious that this sort of funding can and does stimulate the production of intellectual property without allowing initial restricted control to authors and inventors. The question becomes: Can government support of intellectual labor provide enough incentive to authors and inventors so that an equal or greater amount of intellectual products are created compared to what is produced by conferring limited property rights? Better results may also be had if fewer intellectual works of better quality were distributed to more people. If so, then P2 is false and intellectual property rights should not be granted on grounds of utility.

In response to this kind of charge, defenders of the argument based on incentives have claimed that government support of intellectual labor does not and will not create the requisite incentives.[55] It is only by holding out the promise of huge profits that society obtains maximal progress for all. Governments may be able to provide some incentives by paying authors and inventors in advance, but this kind of activity will never approach the incentive created by adopting a system that affords limited monopoly rights to intellectual property.[56]

Another reply typically given is the standard utilitarian argument against centralized planning.[57] Governments are notoriously bad in the areas of predicting the demand of future markets, research and development, resource allocation, and the like. Maximizing social utility in terms of

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[54] While the truth of the third premise will not be challenged, it seems dubious as well. When we consider other more pressing social needs and wants such as food, health care, housing, education, safety, etc., the need for the promotion of many/most intellectual works seems to fall well down on the list.

[55] *See supra* note 39.

[56] *See supra* note 39. For an argument pointing the other direction, see Steve P. Calandrillo, *An Economic Analysis of Intellectual Property Rights: Justifications and Problems of Exclusive Rights, Incentives to Generate Information, and the Alternative of a Government-Run Reward System,* 9 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 301 (1998).

[57] *See supra* note 39.

optimizing the production of intellectual works is best left in the hands of individuals, businesses, and corporations.[58]

Building on the work of Michael Polanvyi[59] and Brian Wright,[60] Steven Shavell and Tanguy Van Ypersele offer a compelling case for a reward model.[61] As Shavell and Ypersele note, reward models may be able to avoid the worries mentioned above while providing incentives. "Under a reward system innovators are paid for innovation directly by the government (possibly on the basis of sales), and innovations pass immediately into the public domain."[62] This system avoids the monopoly power provided by patents while maintaining strong incentives. If rewards, paid annually, are based on sales, then both of the worries mentioned above would fall away. Innovators would still burn the midnight oil chasing that pot of gold, and governments would not have to decide which projects to fund or determine the amount of the reward before its "social value" was known. Taxes or collecting percentages of the profits of these innovations may provide the funds necessary to pay the rewards.

Two other benefits are also obvious. One criticism of the patent system is that monopoly power allows monopoly prices.[63] Under a reward system, consumers would avoid these prices and likely purchase other goods and services. A second criticism is that patents hinder subsequent innovations and improvements of intellectual works.[64] "A famous example of this occurred when James Watt, holder of an early steam engine patent, denied licenses to improve it to Jonathan Hornblower and Richard Trevithick, who had to wait for Watt's patent to expire in 1800 before they could develop their high pressure engine."[65] As with monopoly pricing, a reward system avoids this social cost because the intellectual works pass immediately into the public domain.

Fritz Machlup suggests that large corporations (which own the majority of patents) may hinder general technological progress by controlling entire industries.[66] An obvious example would be Microsoft's control of computer operating systems. Microsoft has captured between sixty and eighty percent of the world market and has patented and copyrighted its

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[58] *See, e.g.*, NOZICK, *supra* note 45; Friedrich Hayek, *Socialist Calculation: The Competitive Solution,* 7 ECONOMICA 125 (1940).

[59] Michael Polanvyi, *Patent Reform*, 11 REV. ECON. STUD. 61 (1943).

[60] Brian Wright, *The Economics of Invention Incentives: Patents, Prizes, and Research Contracts*, 73 AM. ECON. REV. 1137 (1998).

[61] Michael Kremer offers an auction model where the government would pay inventors the price that obtains from the public sale of the innovation. *See* Michael Kremer, *Patent Buyouts*: *A Mechanism for Encouraging Innovation*, 113 Q.J. ECON. 1137 (1998).

[62] Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J. LAW & ECON. 525 (2001).

[63] *See supra* note 39.

[64] *See supra* note 39.

[65] *See* Shavell & Van Ypersele, *supra* note 62, at 543.

[66] MACHLUP, *supra* note 39, at 168-75.

operating systems.[67] Any software company that wants to produce a product must first obtain licensing agreements with Microsoft and construct new software so that it runs on top of the Microsoft platform.[68] It has been argued that granting such patents and copyrights, in effect, allows Microsoft to maintain a stranglehold on the market.[69] This in turn has a *detrimental* effect on social progress. Granting preliminary patents on partial gene sequences may be another instance of this.

Moreover, in some cases, "the patent position of the big firms makes it almost impossible for new firms to enter the industry."[70] Alas, if the groundwork of a certain technology is patented, then the company that owns the patent may control who enters the market. Potential worthy competitors are not granted licensing agreements and are thus prohibited from competing in a particular area. If Machlup's empirical observations are correct, then patent protection cannot be justified in this way.[71]

Certainly the promise of huge profits is part of what drives authors and inventors to burn the midnight oil, but the promise need not be guaranteed by ownership. Machlup argues that patent protection is not needed as an incentive for corporations, in a competitive market, to invest in the development of new products and processes.[72] Sufficient incentive may be provided by the short-term advantage a company enjoys when it develops a new product and is the first to put it on the market. Consider, for example, the initial profits generated by the sales of certain software packages. The market share guaranteed by initial sales, support services, and the like, may provide adequate incentives. Moreover, given the development of advanced copy-protection schemes, software companies can protect their investments and potential profits for a number of years.[73]

E. ELIMINATING PATENT MONOPOLIES

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[67] *See* James Daly, *The Robin Hood of the Rich*, WIRED MAGAZINE, Aug. 1997, at 109.

[68] *Id.* at 109-10.

[69] *Id.* at 110.

[70] MACHLUP, *supra* note 39, at 170.

[71] For other utilitarian-based arguments against owning software ownership, see Richard Stallman, *Why Software Should Be Free*, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 283 (Adam D. Moore ed., 1997), and Kuflik, *supra* note 39, at 228-31. *See also* Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017 (1989) (arguing that an "experimental use" exception of a patented invention may be justified on grounds of social utility).

[72] MACHLUP, *supra* note 39, at 168-69.

[73] Copy-protection schemes are currently available for any kind of intellectual property that takes digital form. *See* John Perry Barlow, *The Economy of Ideas: Everything You Know About Intellectual Property is Wrong*, *in* INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 349 (Adam D. Moore ed., 1997).

Current practice excludes someone who independently invents an already patented intellectual work from ownership.[74] The general rule is that the first person to reduce a new invention to practice will obtain a patent monopoly that excludes all others from using the patented work.[75] This kind of exclusive monopoly is only allowed for processes of manufacture, compositions of matter, and the like — it holds only for the subject matter of patents.[76] Trade secrets and copyrights do not exclude others from *independently* creating or inventing a preexisting work and obtaining title to their expression or secret.[77] The justification typically given for granting exclusive monopoly rights to patents is rule-utilitarian in nature. This rule ensures that valuable ideas will be reduced to practice quickly, so that patents can be obtained and market shares increased or maintained. The rule also limits conflicting patent and infringement claims and requires disclosure so that information can be widely disseminated.

But surely those who have independently created a patented process are worsened by being excluded from obtaining intellectual property rights. This point was originally voiced by Robert Nozick:

> The theme of someone worsening another's situation by depriving him of something he otherwise would possess may also illuminate the example of patents. An inventor's patent does not deprive others of an object which would not exist if not for the inventor. Yet patents would have this effect on others who independently invent the object. Therefore, these independent inventors, upon whom the burden of proving independent discovery may rest, should not be excluded from utilizing their own invention as they wish (including selling it to others).[78]

Imagine the case where company X is a mere two weeks behind company Y in producing the machine that physically embodies the idea or ideas that make up an intellectual work. To simplify matters, suppose that X and Y will not be in competition — maybe X owns certain other patents that Y cannot invent around and vice versa, leaving both in separate markets. If Y obtains exclusive patent rights to this machine, then X is surely worsened. Moreover, why allow multiple copyright and trade secret rights but prohibit multiple patent rights — the arguments grounding this provision for patents would seemingly work for copyrights and trade secrets as well.

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[74] *See* 35 U.S.C. § 154 (2000).

[75] *See id.* § 154 (contents and terms of patents); *see id*. § 114 (models, specimens).

[76] *See id.* § 154 (contents and terms of patents); *see id*. § 100 (definitions); *see id*. § 101 (inventions patentable); 35 U.S.C. § 161 (patent for plants); *see id*. § 162 (description); *see id*. § 163 (grant); *see id*. § 164 (assistance of Department of Agriculture); *see id*. § 171 (patents for design); *see id*. § 172 (right of priority); 35 U.S.C. § 173 (terms of design patents).

[77] 17 U.S.C. § 106 (exclusive rights in copyrighted work); RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 39-45 (1995) (trade secrets).

[78] NOZICK, *supra* note 45, at 181-82.

This could just be a cost of doing business, however. A defense of exclusive patent rights might appeal to the notion that these rights, and subsequent apparent worsenings, are built into the institution of private property and capitalism. Those who lose out are not worsened because the lost opportunities in question are dependent on a system that allows for this exclusivity. This sort of reply simply begs the question against those who doubt the superiority of our system when compared to possible alternatives. Maybe the model that allowed multiple patents would yield the best consequences.

It may be argued that multiple patent rights should not be granted because of a problem similar to the following concern voiced by William Leggett:

> Two authors, without concert or intercommunication, may describe the same incidents, in language so nearly identical that the two books, for all purposes of sale, shall be the same. Yet one writer may make a free gift of his production to the public, may throw it open in common; and then what becomes of the other's right of property?[79]

If we allow multiple individuals to patent the same intellectual work, then problems may arise when one of these property holders decides to give her invention to humankind or when the rights lapse. What becomes of X's property right to some intellectual work when Y decides to allow free use of the invention?

Aside from noting that this problem would fall on copyright institutions as well in this case, non-owners are free to make copies and produce artifacts based on Y's intellectual work, but not on X's. While the practice of giving up one's intellectual property rights and allowing anyone to use the intellectual work would be rare, given market forces, such things may occur. Suppose that an author independently rewrites *Like Water For Chocolate*[80] and gives his expression to all of humankind. What then becomes of Laura Esquivel's rights to her work? In my view, Esquivel would retain rights to control any embodiment of her work. She could not, however, control copies of the new independently created version. This may mean that Esquivel would lose out in economic terms — assuming that everyone who wanted a copy would obtain a free one — but it does not invalidate any of her intellectual property rights. And the same is true of patent rights. In the aforementioned case, company X would retain control over any instantiations of its intellectual work, but this would not include controlling

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[79] Tom G. Palmer, *Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights in Ideal Objects*, 13 HARV. J.L. & PUB. POL'Y 830 (1990) (quoting W. Leggett, DEMOCRATICK EDITORIALS: ESSAYS IN JACKSONIAN POLITICAL ECONOMY 397-98 (L. White ed., 1984)).

[80] Laura Esquivel, LIKE WATER FOR CHOCOLATE (Anchor Books 2001).

every instantiation, e.g., it would not include rights to control the embodiments of Y's intellectual work.

Two other worries with respect to granting multiple patents center on litigation and secrecy. The costs of more litigation and secrecy could be avoided fairly easily however. One strategy used in catching copyright thieves is to plant irrelevant information that would not occur if someone had produced the intellectual work on their own. There is no reason why machines, manuals, input devices, and the like could not contain numerous "imperfections" that would not cause malfunction. Also, the burden of proving originality could be placed on those who present a patent claim after a particular length of time. Second, inventors would have the burden of proving that they didn't copy in cases where the machine or article of manufacture was available for inspection. Multiple patents may lead to secrecy, but given that secrets may be reverse-engineered and do not afford monopoly privilege, it is unlikely that the costs will be prohibitive.

F. ALTERNATIVES TO COPYRIGHTS

A reward model may also be more cost effective than copyright protection, especially given the greater access that reward models offer. Alternatively, offering a set of more limited rights may provide the requisite incentives while allowing greater access. Many authors, poets, musicians, and other artists would continue to create works of intellectual worth without proprietary rights being granted. A number of musicians, craftsman, poets, and other artists simply enjoy the creative process and need no other incentive to produce intellectual works.[81]

Conversely, though, it may be argued that the production of many movies, plays, and television shows is intimately tied to the limited rights conferred on those who produce these expressions. But this kind of reply is subject to the same problem that befell patent protection. The short-term advantage a production company gets from creating a new product and being the first to market it, coupled with copy-protection schemes, may be incentive enough. But even if the production of movies is more dependent on copyright protection than academic writing or poetry readings, all that can be concluded is that incentives may be needed for the optimal production of the former but not the latter. In a recent article, Daniel Gifford argues "that in the case of the fine arts the intellectual property laws do not perform the stimulative purpose that is commonly ascribed to them."[82] If correct, a

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[81] For example, a musician friend of mine creates and performs songs simply for the joy of creation, prestige, and community support.

[82] Daniel J. Gifford, *Innovation and Creativity in the Fine Arts: The Relevance and Irrelevance of Copyright*, 18 CARDOZO ARTS & ENT. L.J. 569, 571-72 (2000).

system that afforded different levels of control depending on the subject matter of the intellectual work would likely be better than our current model.

The justification typically given for the "fair use" rule is that the disvalue of limiting the rights of authors in this way is overbalanced by the value of greater access.[83] However, more limitations could be justified in this way — maybe all that is needed is a prohibition against piracy or a prohibition against the direct copying and marketing of intellectual works. Needless to say, even if the incentives argument is correct, the resulting system or institution would be quite different than modern Anglo-American systems of intellectual property.[84]

Another concern that infects copyright, but not reward models, is the conversion of intellectual works into a digital form. A basic premise of rule-utilitarian copyright (and patent law) is that while ideas themselves cannot be owned, the physical or tangible expressions of them can.[85] Ideas, as well as natural laws and the like, are considered to be the collective property of humanity.[86] It is commonly assumed that allowing authors and inventors rights to control mere ideas would diminish overall social utility, and therefore an idea/expression distinction has been adopted.[87]

However, digital technology and virtual environments are detaching intellectual works from physical expression. The "bit streams" that inhabit the World Wide Web seem to be much less tangible than paper and ink or machines and processes of manufacture. This tension between protecting physical expressions and the status of on-line intellectual works leads to a deeper problem. Current Anglo-American institutions of intellectual property are constructed to protect the efforts of authors and inventors and, at the same time, to disseminate information as widely as possible. But when intellectual works are placed on-line, there is no simple method of securing both protection and widespread access. Once a person has access to a work that is placed on-line, he or she can download it or send copies to friends.

The current reaction to these worries has been to strengthen intellectual property protection in digital environments, yet it is unclear whether such protection will yield greater

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[83] 17 U.S.C. § 107 (2000). *See also* Folsom v. Marsh, 9 F. Cas. 342 (C.C.D. Mass. 1841) (No. 4,901).

[84] For radical deconstructionist arguments calling for the elimination of copyright and patent protection, see Palmer, *Intellectual Property, supra* note 39, and *Are Patents and Copyrights Morally Justified?*, *supra* note 39.

[85] 17 U.S.C. § 102(b) (1988) states: "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."

[86] *See* 17 U.S.C. § 102(b); Int'l News Serv. v. Associated Press 248 U.S. 215 (1918); Miller v. Universal City Studios, Inc., 650 F.2d 1365 (5th Cir. 1981); Midas Prods., Inc. v. Baer, 437 F. Supp. 1388 (D.C. Cal. 1977).

[87] *See supra* note 86.

social utility. For example, consider the Digital Millennium Copyright Act of 1998.[88] Reward systems or further limiting copyrights would likely avoid the disutility of restricting access in digital environments.

Recently Raymond Shih Ray Ku has argued that copyright is unnecessary in digital environments. "With respect to the creation of music, this Article argues that exclusive rights to reproduce and distribute copies provide little if any incentive for creation, and that digital technology make it possible to compensate artists without control."[89] In brief, Ku argues that copyright protects the interests of the publisher – large, up-front distribution costs need to be paid for, and copyright does the job.[90] Digital environments, however, eliminate the need for publishers with distribution resources.[91] Artists, who receive little royalty compensation anyway, may distribute their work worldwide with little cost. Incentives to innovate are maintained, as they have been, by touring, exhibitions, and the like. Thus, if Ku is correct, the incentives-based argument would lead us away, not toward, copyright protection for digital intellectual works.

G. TRADE SECRET AND SOCIAL UTILITY

Trade secret protection appears to be the most troubling from a rule-utilitarian perspective. Given that no disclosure is necessary for trade secret protection, there are no beneficial trade-offs between promoting behavior through incentives and long-term social benefit. From a rule-utilitarian point of view, the most promising aspect of granting intellectual property rights is the widespread dissemination of information and the resulting increase in social progress. Trade secret protection allows authors and inventors the right to slow the dissemination of protected information indefinitely — a trade secret requires secrecy.[92] Unlike other regimes of intellectual property, trade secret rights are perpetual.[93] This means that so long as the property holder adheres to certain restrictions, the idea, invention, product, or process of manufacture may never become common property.[94]

Moreover, non-disclosure agreements and non-competition clauses in employee contracts generally allow companies to maintain secrets. Thus,

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[88] Digital Millennium Copyright Act of 1998, 17 U.S.C. §§ 1201-1205 (1998). *See also* A & M Records, Inc. v. Napster, Inc., 114 F. Supp. 2d 896, 927 (N.D. Cal. 2000) (granting a motion for a preliminary injunction against Napster).

[89] Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263 (2002).

[90] *Id*. at 269.

[91] *Id*.

[92] *See* RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 39-45 (1995).

[93] *Id.*

[94] The two restrictions on trade secrets are the requirements of secrecy and competitive advantage. *See* Forest Laboratories, Inc. v. Pillsbury Co., 452 F.2d 621 (7th Cir. 1971); E.I. duPont deNemours & Co. v. Christopher, 431 F.2d 1012 (5th Cir. 1970).

the entire system of trade secret protection may be eliminated with little, if any, cost.

III. THE EXTERNAL CRITIQUE

Thus far, an internal critique has been given, arguing that even on its own terms, the rule-utilitarian approach fails to justify intellectual property rights. The remainder of this paper considers and examines an external critique of rule-utilitarian moral theory. The first premise of the incentive argument is that society ought to adopt an institution if and only if it leads to or, given our best estimates, will lead to the maximization of overall social utility. As we shall see, this approach to moral theory is beset with difficulties.

A. THE PROBLEM OF ACT DESCRIPTION

Rule-utilitarians determine the rightness or wrongness of actions by appealing to moral rules. In general, actions are to be tested in reference to rules and rules in reference to the consequences. One problem for the rule-utilitarian is that without an adequate account of act description, the theory cannot be applied. Since the evaluation of rules is dependent on the consequences, and acts alone, not rules, have consequences, we must decide how to describe actions in order to justify rules. For instance, a particular action might be described in any of the following ways:

— copying the intellectual work of another;
— copying the intellectual work of another when no one else will;
— copying the intellectual work of another when no one else will, and when doing so will save lives of fifty children.[95]

Since the consequences of everyone doing actions of these different types would be very different, the rule-utilitarian must give us a theory of act description before we can apply the theory. The difficulty is solving the problem in such a way that does not lead rule-utilitarianism to collapse into act-utilitarianism. If we determined kinds of actions (action types) by giving a maximally specific description of each action (action tokens), then the type will only cover one specific act and hence the collapse.[96]

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[95] Adapted from an example given by Don Hubin, Problems for Rule-Utilitarianism 3 (1992) (unpublished manuscript, on file with author). *See also* ERIC D'ARCY, HUMAN ACTS: AN ESSAY IN THEIR MORAL EVALUATION 2-3 (1963) (D'Arcy attributes this type of example to J.J.C. Smart); Johnathan Harrison, Utilitarianism, Universalization, and Our Duty to Be Just (Feb. 23, 1953), *in* PROCEEDINGS OF THE ARISTOTELIAN SOCIETY (1952-53), at 105-34.

[96] This problem is similar to the problem of the sly maxim-maker and Kant's first formulation of the categorical imperative.

Eric D'Arcy and David Lyons have both independently developed answers to the problem of act description.[97] In general their theories distinguish between acts, circumstances, and consequences. The solution that both seem to advocate is that we use moral norms to determine the relevant description of a particular act. Since utilitarians are concerned with the goodness of consequences, we should describe an act in such a way that all the relevant consequences are included.

The problem with this solution is that it is circular. We need to describe acts so that we can determine moral norms, but the only way to adequately determine the appropriate act description is to appeal to moral norms. Moreover, there can be no moral norms outside of the moral theory in question — it is not as if the rule-utilitarian can appeal to deontological considerations to determine the appropriate act description. Crudely put, act descriptions are necessary to determine moral norms, yet moral norms are necessary to determine appropriate act descriptions. Let us assume, however, that the rule-utilitarian can give an adequate account of act description. As we shall see, there are other, possibly more serious, problems to consider.

B. ADOPTION AND ADHERENCE

Although the first premise of both arguments calls for the *adoption* of certain institutions, rule-utilitarians have also defended an *adherence* view. On the adherence view, the correctness of an institution or set or rules is dependent on the results of everyone actually conforming to the rules, whereas on the adoption view, the correctness of an institution is dependent on the results of everyone adopting, but not necessarily actually adhering to, the rules. The adoption model takes into account the possibility of misapplications of the rules as part of the consequences of adoption. The adherence model does not.

There are two versions of the adherence view that have been defended by rule-utilitarians. The restricted model of adherence limits the descriptions of action types by not allowing references to the actions of others as part of the description. Restricted adherence, then, would not allow describing the act of taking another's intellectual property as taking another's intellectual property *when no one else will*.

> The intuition behind this restriction is that if you are allowed to make reference to the actions of others in describing your action, then rule-utilitarianism will allow the same kind of unfairness that act-utilitarianism will in these cases. In particular, it will allow what is called free-riding: receiving benefits from the

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[97] *See* D'ARCY, *supra* note 95, at 1-61; LYONS, *supra* note 36, ch. II.

> cooperative sacrifices of others without making those sacrifices oneself.[98]

The second version of the adherence model is unrestricted in that, outside of the limitations required by a theory of act description in answer to the preceding problem, there are no restrictions on act descriptions.

The problem with the restricted version of the adherence model is that it requires us to follow moral rules even when doing so will lead to bad results. Suppose we had a justified moral rule of the following sort: "Don't copy or pirate the intellectual works of others." Imagine that if everyone were to follow this rule, social utility would be maximized and wealth, peace, and prosperity would visit everyone. Suppose, though, that you are a member of a community of radical communists and that no one else follows the rule. The only thing that will be accomplished by following the rule is that you will be put at a disadvantage compared to your fellows. You respect their intellectual property rights, but they simply copy and pirate anything you produce. Even if it were true that no one else will follow the rule, the restricted version of the adherence model of rule-utilitarianism will say of an individual citizen that she has a moral obligation to do so. This leads to what some have called "rule futility" not "rule utility."[99] Alas, it seems that in some cases considering what actions others will perform does make a difference in terms of moral obligation.

This problem can be circumvented by allowing the descriptions of actions to refer to the actions of others. When considering what the consequences of adhering to a rule would be, we are allowed to include references to the actions of others. We can now describe the action in the previous case as "not violating the intellectual property of others when everyone else will." Given that this would be futile, it is not obligatory. The problem with this unrestricted version of the adherence model is that it looks like it will collapse into act-utilitarianism. Consider the following example given by J. J. C. Smart in "Extreme and Restricted Utilitarianism":

> Suppose there is a rule *R* and that in 99% of cases the best possible results are obtained by acting in accordance with *R*. Then clearly *R* is a useful rule of thumb; if we have no time or are not impartial enough to assess the consequences of an action it is an extremely good bet that the thing to do is to act in accordance with *R*. But is it not monstrous to suppose that if we *have* worked out the consequences and if we have perfect faith in the impartiality of our calculations, and if we *know* that in this

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98 Hubin, *supra* note 95.

99 *Id.*

> instance to break *R* will have better results than to keep it, we should nevertheless obey the rule?[100]

The answer to this problem cannot be to change *R* to include the exception, because the final result of including each exception would be to collapse rule-utilitarianism into act-utilitarianism, i.e., this form of rule-utilitarianism would prescribe the same actions as act-utilitarianism. But surely, *R* with the exception is a better rule on consequentialist grounds than *R* with no exceptions. It would seem that the rule-utilitarian is forced to include the exception that makes *R* a better rule — and the collapse ensues.[101] If this is correct, then either version of the adherence model of rule-utilitarianism is ruled out as a correct and workable moral theory.

Putting adherence to rules aside, there is also the adoption model to consider. On this view, strict conformity is not required when considering the consequences of adopting a rule. Individuals may make mistakes when applying the rule and these mistakes may have adverse consequences. The adoption model, but not the adherence model, allows these latter consequences to be considered when deciding the moral correctness of a rule or set of rules. The problem with the adoption model is that it makes the correctness of moral rules or sets of rules dependent on the rule-following capacities of those who will adopt the rule. Consider the following case adapted from Hubin's society of dolts example:

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[100] Smart, *supra* note 34, at 176. This is also how many act-utilitarians attack rule-utilitarianism. Rule-utilitarianism ends up looking like superstitious rule worship.

[101]

> If unrestricted adherence RU is to be distinct from AU, there must be some action, call it A_{best}, that produces the best consequences but is prohibited by the best moral rule. Call this rule R_{best}. Imagine that this is so. (Or, try to imagine it, because as it will turn out, it is impossible. This is the key to the argument. If it is impossible for this to be true, then this version of RU is equivalent to AU.) R_{best} requires $A_{not\text{-}best}$ instead of A_{best}. Now imagine another rule that is exactly like R_{best} except that instead of requiring $A_{not\text{-}best}$ it requires in its place A_{best}. Now compliance with this other rule, will produce all the utility that compliance with R_{best} will at every other time, but, when it comes time to perform A_{best} or $A_{not\text{-}best}$, this other rule will produce more utility than R_{best}. So, this other rule produces equal utility to R_{best} at all other times and more utility in the choice of A_{best} over $A_{not\text{-}best}$ and, therefore, it produces more utility than R_{best}. But that means that R_{best} isn't the best rule — the other rule is better. This violates our original assumption and shows that it is not possible for the best rule to require anything but the best action at every time.

Hubin, *supra* note 95.

> Imagine that one lives in a society of dolts. These people are so stupid that they can't apply rules that have any exceptions at all. Their rules must be simple statements. Suppose further that you are trying to decide if you should copy and pirate the intellectual works of another given that in doing so you will save hundreds of children from a new deadly virus. You might think this is morally permissible — that a good moral rule would treat this case as an exception to the rule "don't copy or pirate the intellectual works of another." But, on the adoption model, this is not so. If others adopted the rule "Don't copy or pirate the intellectual property of another except when doing so will save the lives of hundreds of children (or lead to really bad consequences)" they would be so confused in applying it that they would pirate all kinds of intellectual property and cause a general decrease in overall utility. Therefore, the best rule to have adopted in this society of dolts is the rule, "Never copy or pirate the intellectual works of another"; and that rule prohibits your copying even when lives are at stake.[102]

If misapplications of a rule are to be factored in when considering the consequences of everyone adopting a rule, then the rule-following capacities of individuals may play an important role in determining the correctness of moral rules. But this seems unacceptable.

But why is this unacceptable? Why shouldn't rule-following capacities play an important role in determining which moral rules are justified? The answer cannot be that this would lead to bad consequences given the assumption that in a society of dolts exceptionless rules are best. But different individuals have different rule-following capacities, and this leads to a problem. Suppose we introduce into Hubin's society of dolts one expert rule follower who correctly follows complex rules that have multiple exceptions. This individual recognizes that the rule, "Never copy or pirate the intellectual works of another," is not as good as the rule, "Never copy or pirate the intellectual works of another except when you can save the lives of hundreds of children." The question then becomes, why shouldn't the expert rule follower adopt the latter rule rather than the former? The worry becomes apparent when, in the same circumstances, one individual is morally required to do X while another individual is morally required to not do X — given our example, the average dolt is required to not steal the intellectual property of another while the expert rule follower is required to do the opposite. An odd kind of moral relativism looms.

Moreover, the view that the rule-following capacities of individuals are important in determining correct moral rules leads back to a conception of rules as rules of thumb or strategic rules. We follow these latter kinds of

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[102] *See* Hubin, *supra* note 95.

rules when we cannot be sure of our utility-calculating abilities. Maybe the issue before us is too near and dear, or the consequences stretch too far into the future, or our judgment is clouded for some other reason. In cases like these we follow rules because they have in the past maximized utility for everyone affected. But if we know better, if our judgment is clear, or if our *capacities* change, then we must abandon the rule or add the exception. Thus, rules become fluid, and a collapse of rule-utilitarianism into act-utilitarianism is apparent.

Finally, it is not as if this more sophisticated utilitarian theory will allow the consequentialist to sidestep the problems that befall the act-utilitarian. Adherence models or adoption models of rule-utilitarianism may still, in theory, advocate almost any atrocity. If following some rule maximizes utility, then we ought to follow the rule no matter what its content. Suppose the capacities of the dolts, assuming an adoption model, leads them to conclude that others — the ones who have a different skin pigmentation, or religion, or eye color, or gender — lack free will and are really just simple animals. The dolts adopt the rule, "Do what you want with your property or animals," because they figure that following this rule will maximize utility for everyone affected. And assume it would, given their capacities. Have we just justified racism or sexism for the dolts? Would we have to say of such a culture that, given their capacities, they ought to follow such a rule?

The answer, it could be argued, lies in the difference that Joel Feinberg notes between two normative questions: "(1) What (speaking most generally) are the correct moral principles for use by a private individual in guiding his own personal conduct (including that part of his conduct that falls within the scope of public rules)?; (2) Which public rules or regulations of the kind that control private conduct by imposing duties and conferring rights should be adopted by a given community?"[103] This latter notion is sometimes called "actual practice rule-utilitarianism" and concerns public rules, maybe laws, already in force.[104] Actual practice rule-utilitarianism need not collapse into act-utilitarianism, because, while certain exceptions will be built into the rules, the general act-utilitarian exception — follow rule *R* unless acting otherwise would maximize net utility — will almost never be invoked because of the difference between adherence and adoption. Public rules will almost never allow an act-utilitarian exception because citizens are apt to misapply the exception.

While this may allow the actual practice rule-utilitarian to avoid a collapse into act-utilitarianism, the society of dolts case may still have force, and there is now a further problem. What justifies an actual practice rule viewed as a public rule or law? If an actual practice rule is to be justified by

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[103] Feinberg, *supra* note 38, at 377.

[104] Feinberg notes that a defense of actual practice rule-utilitarianism is given by John Rawls. *See* John Rawls, *Two Concepts of Rules*, 64 PHIL. REV. 3-32 (1955), *reprinted in* THEORIES OF ETHICS, *supra* note 34, at 144-70 (all page citations refer to the reprint).

utility in relation to the capacities of citizens, then we again have a rule that could have almost any content. If the rule is intended to allow for the maximization of social utility bounded by certain rights of individuals, then an important question has been begged — why think that intellectual property rights are not like other individual rights? I take this latter worry to also apply if we view the rules of Anglo-American intellectual property to be what John Rawls calls constitutive practice rules.[105]

> . . . the rules of practices are logically prior to particular cases. This is so because there cannot be a case of an action falling under a rule of a practice unless there is the practice . . . . We may think of the rule of a practice as defining offices, moves, and offenses. . . . Striking out, stealing a base, balking . . . are all actions which can only happen in a [baseball] game. [Furthermore,] if one wants to play a game, one doesn't treat the rules of the game as guides . . . .[106]

While this view may be helpful in solving the problem of act description and it may be useful when thinking about the action of registering a copyright, it leaves open the possibility that intellectual property rights may exist prior to and independent of copyright, patent, and trade secret practices.[107]

IV. CONCLUSION

In conclusion, a different kind of external objection to rule-utilitarian intellectual property deserves mention. The problem is not a difficulty with rule-utilitarianism as a correct moral theory, but rather with how it fits with other rights generating moral theories found in the Anglo-American tradition. Life rights, privacy rights, and tangible property rights are given a deontic base that stand athwart utilitarian concerns. Even if following the rule, "don't violate life rights," were to *diminish* overall social utility, the dominant Anglo-American tradition would be to follow the rule anyway. This is not to say that rights are absolute and can never be overridden by bad consequences. The point here concerns the grounds of rights, not their relative strength. If systems of intellectual property rights are indeed justified on rule-utilitarian grounds and life rights and the like are deontic in nature, then there is a kind of global inconsistency within the Anglo-American tradition.[108] Why, for instance, are rights to rocks, cars, and houses justified

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[105] *Id*. at 163.

[106] *Id.* at 163-64.

[107] For further concerns with Rawls' view and, more generally, with actual practice rule-utilitarianism and ideal rule-utilitarianism, see LYONS, *supra* note 36, ch. V.

[108] Palmer argues that this is good reason for revising or eliminating the regimes of copyright and patent. Palmer, *Intellectual Property, supra* note 39. Michael Davis echoes this

on different grounds than books, works of art, and processes of manufacture? Why are my rights to control a copy of Hemingway's *The Sun Also Rises* somehow less subject to the demands of social utility than his rights to control the intellectual work? Consequentialist moral theories, like rule-utilitarianism and deontological theories, are mutually exclusive – they cannot both be true at the same time.[109] While this claim has not been defended, one could argue that intellectual property rights, like our other natural rights to life, liberty, and physical property, exist independent of social utility arguments.[110]

Nevertheless, assuming that incentive-based arguments are compelling, it has been argued that current Anglo-American systems of intellectual property either give away too much control or should be replaced by a different model altogether. Empirical questions about the costs and benefits of copyright, patent, and trade secret protection are notoriously difficult to determine. Economists who have considered the question indicate that either the jury is out, so to speak, or that other arrangements would be better. George Priest claims that "[t]he ratio of empirical demonstration to assumption in this literature must be very close to zero . . . [recently it] has demonstrated quite persuasively that, in the current state of knowledge, economists know almost nothing about the effect on social welfare of the patent system or of other systems of intellectual property."[111] This echoes Machlup's sentiments voiced twenty-four years earlier and Clarisa Long's view: "Whether allowing patents on basic research tools results in a net advance or deterrence of innovation is a complex empirical question that remains unanswered."[112] As already noted, if we cannot appeal to the progress-enhancing features of intellectual property protection, then *the rule-utilitarian can hardly appeal to such progress as justification*.

On the other hand, recent economic studies have tended to support other arrangements, such as granting fewer rights or a reward model, as

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concern in *Patents, Natural Rights, and Natural Property*, *in* OWNING SCIENTIFIC AND TECHNICAL INFORMATION 241 (Vivian Weil & John Snapper eds., 1989).

[109] Consequentialist moral theories hold that consequences are all that matter when determining moral thoughts. Deontology, on the other hand, holds that there is more to rightness or wrongness than good consequences – sometimes the consequences are irrelevant.

[110] For a lengthy defense of a Lockean model of intellectual property, see ADAM D. MOORE, INTELLECTUAL PROPERTY & INFORMATION CONTROL: PHILOSOPHIC FOUNDATIONS AND CONTEMPORARY ISSUES (2001); Adam D. Moore, *Intangible Property: Privacy, Power, and Information Control*, 35 AM. PHIL. Q. 365 (1998); Adam D. Moore, *A Lockean Theory of Intellectual Property,* 21 HAMLINE L. REV. 65 (1997); INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS (Adam D. Moore. ed., 1997).

[111] George L. Priest, *What Economists Can Tell Lawyers About Intellectual Property*, *in* 8 RESEARCH IN LAW AND ECONOMICS, THE ECONOMICS OF PATENTS AND COPYRIGHTS 19, 19-21 (John Palmer ed., 1986).

[112] *See* MACHLUP, *supra* note 39. Clarisa Long, *Patents and Cumulative Innovation*, 2 WASH. U. J.L. & POL'Y 229, 245 (2000).

superior to current Anglo-American institutions of intellectual property.[113] If so, then the incentive-based social progress argument will justify these other models and not current Anglo-American instantiations of copyright, patent, and trade secret.

Externally, it has been argued that rule-utilitarian moral theory – the theory that would best support the theoretical premise of the incentives argument – is beset with difficulties and generates rights that are inconsistent with other rights found within the Anglo-American tradition.

If either critique is successful, then Anglo-American systems of intellectual property, institutions that are coercive and protect vast holdings, stand in need of justification. Hopefully, upon recognizing the difficulties that infect rule-utilitarian intellectual property, we may begin to move away from our current system – a system that views intellectual property rights as state-*created* entities – and toward institutions that acknowledge and uphold the natural rights of authors and inventors.

[113] "We conclude in our model that intellectual property rights do not possess a fundamental social advantage over reward systems . . . ." *See supra* note 62, at 525; *see also supra* note 82.