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OASIS OR MIRAGE?: EFFICIENT BREACH AS A RELIEF TO THE BURDEN OF CONTRACTUAL RECAPTURE OF PATENT AND COPYRIGHT LIMITATIONS

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I. Introduction

As the significance of intellectual property increases in the United States, the importance of the limitations on the relevant legal protection schemes also increases by the same, if not a greater, measure. While society gradually allows the enforceability of intellectual property rights to strengthen, it also demands a stricter construction of the boundaries of those rights, lest unprotected and culturally-important endeavors suffer. In particular, limitations such as those on copyright power through the application of "fair use" principles, and patent muscle through the "exhaustion of rights" doctrine, have received recent, vociferous support.² There is a presumption that a balance in our intellectual property laws between content owners and the public domain must be maintained if creativity, innovation, and intellectual freedom are to coexist peacefully. However, a potential obstacle to the efficient administration of these legislatively-crafted powers and limitations exists: the ability of individuals to alter their rights and obligations by contract.

To be sure, the sanctity of private contract in Western society is a principle just as strong as those articulated above.³ The right of pri-

^{1.} Evidence is abundant that, despite the economic downturn of recent years, businesses see intellectual property as an increasingly important investment. For example, according to statistics published by the United States Patent & Trademark Office, the number of patent applications continues to rise each year. In the 2002 fiscal year, 353,394 applications were filed, an increase of over 100,000 from fiscal year 1998. See U.S. PATENT & TRADEMARK OFFICE, U.S. DEP'T OF COMMERCE, FY 2002 USPTO PERFORMANCE AND ACCOUNTABILITY REPORT 106 (2002).

^{2.} See, e.g., Andrea Foster, College Groups Challenge Copyright Office on Digital-Copyright Law, Chron. Higher Educ., Jan. 10, 2003, at A29; Robert Pear, Senate Votes Again to Allow Importing of Drugs from Canada, N.Y. Times, June 21, 2003, at A13; see also Editorial, Sure, Cheap Canadian Drugs, WALL St. J., July 23, 2002, at A14.

^{3.} As evidence of the importance of private contract, one need only look to the U.S. Constitution's "contract clause." U.S. CONST., art. I, § 10 ("No State shall . . . pass any . . . Law impairing the Obligation of Contracts"). Although modern case law makes it clear that the clause is not to be interpreted so strictly as to prevent *any* interference with private contract, *see* Home Bldg. & Loan Ass'n v. Blaisdell, 290 U.S. 398, 426 (1934), the Supreme Court has also stated that its decisions have "not indicated that the Contract Clause was without meaning in modern constitutional jurisprudence, or that its limitation on state power was illusory. Whether or not the protection of contract rights comports with current views of

vate parties to decide what best suits their economic and social needs is key to the efficient operation of a capitalist economy. But what if the alteration of rights and obligations by private contract becomes so prevalent that it subverts the delicate balance achieved by specific statutory legal schemes? Can such contracts be used by those having greater leverage to effectively eliminate important restraints on intellectual property rights? Or must the enforcement of such contracts be restrained in order to preserve the statutory order? Interestingly, the increasing prevalence of intellectual property limitation "waivers" in the widely-used variety of contracts colloquially known as "shrink-wrap," "click-wrap," or "browse-wrap" licenses has only made the resolution of these issues more important in recent years.

As intellectual property aficionados are well aware, this problem has been a hot topic for some time and has prompted the authorship of many excellent law review articles. Several courts have already considered discrete questions in limited contexts (with the weight of the most recent decisions on the side of preserving private contracts). However, an issue that has been substantially buried in all of the discussion of contract enforceability and liability is whether the application of efficient contract *remedies* may alleviate the apparent tension between the private contract and intellectual property limitation regimes. At least one decision from a federal appellate court has argued that the Law and Economics doctrine of "efficient breach" can justify an intrusion of contract law into statutory protection schemes. If

wise public policy, the Contract Clause remains a part of our written Constitution." United States Trust Co. v. New Jersey, 431 U.S. 1, 16 (1977).

^{4.} See P.S. ATIYAH, AN INTRODUCTION TO THE LAW OF CONTRACT 3–7 (5th ed. 1995) (noting, from a British perspective, the importance of free and voluntary exchange for efficiency in Western economies).

^{5.} See infra Part III.B.

^{6.} See, e.g., Deanna L. Kwong, The Copyright-Contract Intersection: SoftMan Products Co. v. Adobe Systems, Inc. & Bowers v. Baystate Technologies, Inc., 18 BERKELEY TECH. L.J. 349 (2003); Raymond T. Nimmer, Licensing in the Contemporary Information Economy, 8 Wash. U. J.L. & POL'Y 99 (2002); Mark A. Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, 87 Cal. L. Rev. 111 (1999); Michael J. Madison, Legal Ware: Contract and Copyright in the Digital Age, 67 FORDHAM L. Rev. 1025 (1998); Mark I. Koffsky, Patent Preemption of Computer Software Contracts Restricting Reverse Engineering: The Last Stand?, 95 COLUM. L. Rev. 1160 (1995); Mark A. Lemley, Intellectual Property and Shrinkwrap Licenses, 68 Cal. L. Rev. 1239 (1995); David Rice, Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering, 53 U. PITT. L. Rev. 543 (1992).

^{7.} For example, courts have considered electronic "click-wrap" or "click-through" agreements. See Christina Kunz et al., Click-Through Agreements: Strategies for Avoiding Disputes on Validity of Assent, 57 Bus. LAW 401 (2001) (summarizing recent cases and the factors courts consider most relevant in determining their enforceability).

^{8.} See Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1325–26 (Fed. Cir. 2003), cert. denied, 123 S. Ct. 2588 (2003) ("Thus, case law indicates the First Circuit would find that private parties are free to contractually forego the limited ability to reverse engineer a software product under the exemptions of the Copyright Act. Of course, a party bound by such a contract may elect to efficiently breach the agreement in order to ascertain ideas in a com-

adopted, this approach could lead to a general re-evaluation of the common arguments and positions.

But is efficient breach a realistic alternative in the context of the above agreements? Evidence of so-called "market failures" and other behavioral influences suggests that the contracting parties may not be able to make the economically rational decision in every case. In other words, the solution to the problem may be so occluded that it is essentially unavailable; a theoretical oasis that is, in reality, a mirage.

This Article will give in-depth consideration to the extent that "efficient breach" can resolve the conflict between private contract and statutory intellectual property rights limitations. In Part II, the Article will begin with a comprehensive discussion of intellectual property rights limitations, highlighting two major categories of limitations in copyright and patent law and the purposes underlying them. In Part III, the Article will address the application of contracts to constrain intellectual property limitations and court rulings in the context of some of the specific examples detailed in Part II. In Part IV, the Article will consider the legal consequences of contractual breach including the concept of efficient breach — and will discuss the likely effect on the respective parties and on society. Part IV will also use a modeling technique influenced by experimental economics theory to further consider the consequences of contractual breach. Finally, Part IV will provide recommendations that would ensure the most efficient merging of federal intellectual property law and state contract law.

II. IMPORTANT LIMITATIONS IN A BALANCED SYSTEM OF INTELLECTUAL PROPERTY RIGHTS

The intellectual property regimes in the United States, as well as in most of the industrialized world, attempt to achieve a balance between the needs of society and investment incentives that spur the development of desirable things and enterprises. While it is generally accepted that strong property rights are necessary to provide sufficient economic return on investment in development of the property, it is also acknowledged that property rights exact a social cost. To mini-

puter program unprotected by copyright law. Under such circumstances, the breaching party must weigh the benefits of breach against the arguably *de minimis* damages arising from merely discerning non-protected code.").

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^{9.} Although the roots go back much further, it is significant that the concept of this balance is such a bedrock principle in United States law that it is written into the Constitution. *See* U.S. CONST., art. I, § 8, cl. 8.

^{10.} See, e.g., Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989) ("The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and useful Arts.'"); see also Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) ("[The Constitutional protection for patents and copyrights] is intended to motivate the creative activity of authors and inventors by the

mize these costs, intellectual property rights are limited in the areas in which the societal costs outweigh the benefits of economic incentives. These limitations are especially prevalent in areas in which the economic return is either minimal or has already been realized.

While others have discussed the importance of certain intellectual property limitations, they have generally focused on only one category of limitation, such as the ability to engage in reverse engineering of software. A more comprehensive approach is useful in assessing the true impact of contracts on the intellectual property system. To get the full scope of the phenomenon, one must consider the broad array of limitations that exist across the landscape of patents and copyrights, the two protection schemes that share a common purpose of producing incentives for innovation and creativity. These limitations are derived from either exhaustion or fair use principles.

A. Limitations Based on the Exhaustion of Rights Following the First Sale

The general view is that control over intellectual property is tied to the need of an owner to receive his or her expected compensation for the creation of the property. ¹² Only by excluding others from the use, sale, duplication, etc., of the property can one hope to recoup one's investment. ¹³ Once compensation is received, however, the need for control is theoretically eliminated. Continuing control would merely permit an intellectual property owner to obtain compensation in excess of the investment value of the goods. ¹⁴

In consideration of that general view, common law and statutory rules have been developed to limit the enforcement of intellectual property rights related to the object in which they are embodied following the first sale of that object (which is authorized by the intellec-

provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.").

12. Theories about the importance of this compensation vary between and sometimes within intellectual property type. *See, e.g.*, Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 539, 546 (1985) (explaining that the copyright system is "designed to assure contributors to the store of knowledge a fair return for their labors"); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 282–83 (1977) (discussing the "reward" and "prospect" theories of awarding patent rights).

^{11.} See supra note 6.

^{13.} This is an accepted rationale for creating property rights in information. Without the establishment of rights of exclusion, information is non-rivalrous and non-excludable, precluding any means of dissuading "free-riders." *See* ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 126 (3d ed. 2000).

^{14.} The concept of an appropriate amount of compensation is based on the idea that intellectual property creators invest their time and money with an eye toward obtaining the compensation provided by the principle sale. See Margreth Barrett, The United States' Doctrine of Exhaustion: Parallel Imports of Patented Goods, 27 N. KY. L. REV. 911, 913–14 (2000). Subsequent sales are presumed to be outside of the creator's view.

tual property owner).¹⁵ These rules can be grouped together broadly and designated as "first sale" or "exhaustion" limitations.¹⁶ Once the first sale has been made, the owner is assumed to be compensated for basic use rights related to the covered object, even though those use rights might tread close to one of the owner's other exclusive rights.¹⁷

Exactly what basic use rights are conveyed as a result of the sale is a question that has been a major focus of the case law in various iterations of the doctrine. Courts attempt to ensure that the purchaser of an article embodying the intellectual property right receives whatever he or she expects, without depriving the intellectual property owner of the opportunity to profit from other markets.

1. Right to Repair a Lawfully-Purchased Patented Device or Apparatus

The ability to keep a machine or article in good working order is obviously fundamental to its value. If a purchaser were compelled to discard a machine or article as soon as soon as a minor repair was required, then an artificial cap effectively would be placed on the machine's useful life, thereby reducing its utility. It is therefore not surprising that courts recognize that the purchaser of a good covered by a U.S. patent has a need and a right to maintain the functionality of the good as long as possible. This right would not seem to unduly impact the rights of the patent owner, who had already been compensated at the point of sale for the value of the use of the invention embodied in the good. 19

But it is also not surprising or unreasonable that the right to repair should be subject to some restriction. At some point, this right may have an adverse effect on the patent owner. A limitation becomes necessary when a purchaser "repairs" a patented good to the extent that the good is essentially reconstructed.²⁰ In that case, it is fair to say that the purchaser is not simply preserving the usability of the good, but is making a new good. Because a patent owner retains the right to

^{15.} Note that these rules relate to the first sale of an object embodying the intellectual property right, not the right itself. The law is quite clear that the sale of an article embodying a right does not automatically transfer the intellectual property right. *See, e.g.*, 17 U.S.C. § 202 (2000) (articulating the rule in the context of the Copyright Act). One can sell the right itself, of course, but that is a separate transaction.

^{16.} Although the literature tends to flip back and forth between the terms, the reader should be aware that the phrase "exhaustion of rights" is more commonly used in patent law, while "first sale doctrine" is usually used when discussing copyrights.

^{17.} See United States v. Masonite Corp., 316 U.S. 265, 277–80 (1942).

^{18.} See, e.g., King Instrument Corp. v. Otari Corp., 814 F.2d 1560, 1564 (Fed. Cir. 1987); Porter v. Farmers Supply Serv., Inc., 790 F.2d 882, 886 (Fed. Cir. 1986).

^{19.} See King Instrument, 814 F.2d at 1560.

^{20.} See FMC Corp. v. Up-Right, Inc., 21 F.3d 1073, 1077 (Fed. Cir. 1994).

exclude others from "mak[ing]" patented items,²¹ courts find that reconstructing a purchased good is not a right conveyed with the sale.²² Any purchaser engaging in reconstruction is, therefore, infringing the patent. This is the basis of the so-called "repair vs. reconstruction doctrine," which has received quite an extensive treatment in U.S. patent law.²³

The Supreme Court gave the doctrine its clearest articulation in the 1961 case of *Aro Manufacturing Co. v. Convertible Top Replacement Co. (Aro I)*.²⁴ In this case, involving a defendant who sold replacement materials for the plaintiff's patented convertible top, the Court determined that the purchaser of a patented item or combination had the right to replace or repair any part, no matter how essential, as long as the individual part was not itself patented.²⁵ According to the Court, "use of the whole' of the patented combination through replacement of a spent, unpatented element does not constitute reconstruction."²⁶ The Court found that to afford patent protection in such cases would constitute an improper extension of the "patent monopoly."²⁷

Subsequent decisions in the appellate courts have given *Aro I* an expansive reading, finding that even sequential replacement of essentially all of the parts in a patented invention is permissible, as long as they are not replaced at the same time.²⁸ Additionally, it is permissible to repair in order to extend the life of a product for subsequent purchasers, even if the product is discarded by the original purchaser as spent.²⁹ The repair versus reconstruction doctrine places a strict limi-

^{21. 35} U.S.C. § 271(a) (2000).

^{22.} See FMC, 21 F.3d at 1077.

^{23.} See DONALD S. CHISUM, PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 16.03[3] (2003).

^{24. 365} U.S. 336, 339–40 (1961) ("Since the patentees never claimed the fabric or its shape as their invention, and the claims made in the patent are the sole measure of the grant, the fabric is no more than an unpatented element of the combination which was claimed as the invention, and the patent did not confer a monopoly over the fabric or its shape." (internal citations omitted)).

^{25.} See id.

^{26.} Id. at 346.

^{27.} *Id.* at 342. As an aside, the author notes that the use of the term "monopoly" in connection with patents, though common in intellectual property jurisprudence, is generally incorrect from an economic point of view. *See* Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1729–38 (2000) ("Whether or not any patent or other intellectual property right confers an economic monopoly is an empirical question, but it seems likely that all trademarks, almost all copyrights, and most patents are not monopolies.").

^{28.} See FMC Corp. v. Up-Right, Inc., 21 F.3d 1073, 1078 (Fed. Cir. 1994).

²⁹ See Jazz Photo Corp. v. Int'l Trade Comm'n, 264 F.3d 1094, 1098–99 (Fed. Cir. 2001), cert. denied, 536 U.S. 950 (2002) (holding that replacing film in disposable cameras is permissible repair, even though the cameras in question were discarded by the original purchasers and the repaired models were sold to a new group of consumers).

tation on the patentee's exclusive right, despite the fact that this limitation has an effect on the market for newly manufactured goods.

2. General Exhaustion of Patent Rights Following the First Authorized Sale of a Patented Item

In addition to limitations on enjoining repairs, patents have associated with them a general exhaustion of rights rule.³⁰ In application, exhaustion of rights simply refers to the end of a patentee's control over the use and subsequent disposal of a patented good following its sale under authority of the patentee.^{31,32} The idea is that a patentee's reward for inventing is satisfied with payment for the first sale of the good; a patentee would reap an excessive reward if he or she were deemed to have control over the purchaser's use or subsequent sale of the item.³³

The Supreme Court commented extensively on the concept of patent exhaustion in the 1942 case of *United States v. Univis Lens Co.*³⁴ In *Univis*, the Court confronted a patentee's attempt to control the retail sales price of patented articles already sold to wholesalers. The Court prohibited such conduct, finding that "sale of [a patented article] exhausts the monopoly in that article and the patentee may not thereafter, by virtue of his patent, control the use or disposition of the article."³⁵

The determination as to whether a patentee has exhausted his or her rights depends on whether an actual sale is found.³⁶ If so, the patentee's ability to control the use and subsequent sale of an article cov-

^{30.} See supra notes 15–17. Recent decisions support the idea that the repair v. reconstruction doctrine is merely an expression of one aspect of the exhaustion of rights rule. See, e.g., Surfco Hawaii v. Fin Control Sys. Pty. Ltd., 264 F.3d 1062, 1065 (Fed. Cir. 2001), cert. denied, 536 U.S. 939 (2002). But see, e.g., Mark D. Janis, A Tale of the Apocryphal Axe: Repair, Reconstruction and the Implied License in Intellectual Property Law, 58 MD. L. REV. 423, 492–96 (1999) (arguing that a more proper organizing principle for the repair vs. reconstruction doctrine is derived from the law of implied licenses).

^{31.} It is important to understand that not all patents may be exhausted by sales. Patents may cover tangible items, such as physical products or chemical formulas, but patents may also cover intangible things, such as methods of achieving some useful result. *See* 35 U.S.C. § 101 (2000). The former will be subject to exhaustion and repair limitations but the latter will not unless embodied in a product.

^{32.} See Barrett, supra note 14, at 911–12. Some commentators distinguish exhaustion following first sale from the doctrine of "implied license" to use a patented good in whatever way is necessary to effectuate the purpose of the sale. See, e.g., Julie E. Cohen & Mark A. Lemley, Patent Scope and Innovation in the Software Industry, 89 CALIF. L. REV. 1, 30–32 (2001).

^{33.} See Barrett, supra note 14, at 913-14.

^{34. 316} U.S. 241, 249 (1942).

^{35.} Id. at 250 (citing Bloomer v. McQuewan, 55 U.S. (14 How.) 539, 549-50 (1852)).

^{36.} See United States v. Masonite Corp., 316 U.S. 265, 278 (1942) (Exhaustion of the patent right depends on "whether or not there has been such a disposition of the article that it may fairly be said that the patentee has received his reward for the use of the article.").

ered by the patent is quenched. The question of an authorized sale becomes particularly sticky when extraterritoriality enters into the picture. Do foreign sales exhaust a patent owner's right to exclude use and sale? Surprisingly, the answer is unclear in U.S. patent law because it has not been addressed by the courts in detail.³⁷ The outcome could have serious consequences for not only mundane product sales such as grey market cameras,³⁸ but also for broad-based political agendas.³⁹

The exhaustion doctrine protects not only the original purchaser, but also subsequent purchasers against accusations of infringement of a patentee's right to exclude use.⁴⁰ This is despite the fact that a straightforward reading of the statute⁴¹ does not so circumscribe a patentee's rights of exclusion.⁴²

3. Exhaustion of Copyright Following the First Authorized Sale of an Authorized Copy

In copyright law, the concept of exhaustion of rights — more commonly referred to as the "first sale doctrine" — is based on the same idea as the corresponding rights limitation in patent law. The underlying rationale is that the copyright owner has received his or her "reward" from a sale, and is entitled to nothing more. 43

One difference is that the copyright law limitation is actually codified in the Copyright Act. Section 109 refers to the "Effect of

^{37.} See CHISUM, supra note 23, § 16:03 [2][a][iv].

^{38.} See Jazz Photo Corp. v. Int'l Trade Comm'n, 264 F.3d 1094 (Fed. Cir. 2001), cert. denied, 2002 U.S. LEXIS 4858 (June 24, 2002).

^{39.} For example, a recent Congressional legislative initiative would allow licensed pharmacists to import lower priced drugs from Canada for sale in the U.S. See Pear, supra note 2, at A13. However, if a patent owner does not exhaust its right to exclude sale and use in the United States by selling a product in Canada, those pharmacists could be infringers. See Jazz Photo, 264 F.3d at 1105 ("United States patent rights are not exhausted by products of foreign provenance. To invoke the protection of the first sale doctrine, the authorized first sale must have occurred under the United States patent. See Boesch v. Graff, 133 U.S. 697, 701–03 (1890) (a lawful foreign purchase does not obviate the need for license from the United States patentee before importation into and sale in the United States).").

^{40.} See, e.g., Jazz Photo, 264 F.3d at 1105.

^{41. 35} U.S.C. § 271 (2000).

^{42.} In an interesting commentary on how far science has progressed, however, a recent decision suggests that the biological *progeny* of patented articles are not exempt from infringement by virtue of exhaustion (because the patentee has received no payment for them). Thankfully, this appears to be an issue only for those patented articles capable of reproduction. *See* Monsanto Co. v. McFarling, 302 F.3d 1291, 1298–99 (Fed. Cir. 2002), *cert. denied*, 537 U.S. 1232 (2003) (finding that a farmer who used patented seeds to produce additional seeds without the authority of the patent owner is not immune from charges of infringement under the doctrine of exhaustion "as the new seeds grown from the original batch had never been sold.").

^{43.} See, e.g., Borne v. Walt Disney Co., 68 F.3d 621, 632–33 (2d Cir. 1995) (noting that the concept of the reward in exchange for the dispossession of the copy is so central that it may constrain a literal interpretation of the statutory language).

transfer of a particular copy or phonorecord," and states that a specific limitation on a copyright owner's exclusive rights is the entitlement of the owner of a particular copy to "sell or otherwise dispose of possession of that copy" without the authority of the copyright owner. 44 By the provisions of the Act, a purchaser can sell, lease, or destroy any individual authorized copy, regardless of the fact that such an act may interfere with the market for new goods covered by the copyright owner's intellectual property interests. 45

The fact that the first sale doctrine is statutory suggests that it must be integrated with, and limited by, other parts of the statute. However, the Supreme Court has given § 109(a) a broad reading and has not held it subject to other supplementary rights given to copyright owners in various provisions of the Act. For example, in *Quality* King Distributors, Inc. v. L'Anza Research International Inc., the Supreme Court determined that a provision giving copyright owners exclusive rights over the importation of copyrighted goods is subject to the limitations in § 109(a). 46 The Court found it immaterial that the importation of so-called "grey market" goods into the United States could affect a copyright owner's domestic sales market.⁴⁷ Similarly, the Court found that the Copyright Act cannot be interpreted to take into consideration the fact that international treaties may demand such protection.⁴⁸ It is notable that the application of the first sale doctrine to extraterritorial sales of copyrighted goods is the opposite of the trend in applying patent exhaustion to extraterritorial sales of patented goods, despite the fact that the underlying rationale of first sale and exhaustion supports similar treatment. 49

Although copyright ownership does not contain the right to exclude the "use" of copyrighted material per se, 51 the right to exclude public display and performance is somewhat analogous. 52 A narrow first sale-like limitation exists for public display right, but not for the

^{44. 17} U.S.C. § 109(a) (2000).

^{45.} One of the most fascinating aspects of the statute is that a special exception to this rule was carved out for owners of copyright in sound recordings and computer software. See 17 U.S.C. § 109(b)(1)(A) (2000). Such owners have the right to restrict rental dispossession, but not subsequent sales, by purchasers. See id.

^{46. 523} U.S. 135, 150-51 (1998).

^{47.} Id. at 148-49.

^{48.} *Id.* at 153–54.

^{49.} See supra Part II.A.2. One explanation for the difference may be that patent exhaustion is a judicially-created limitation that is constrained by statutory rights, whereas copyright first sale is a solid statutory limitation that is not subject to constraint by basic ownership rights.

^{50. &}quot;Use" of copyrighted material refers to the use of any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, illustrated, or embodied in the work. *See* 17 U.S.C. § 102(b).

^{51.} Since copyrights are not, by definition, utility oriented, *see* 17 U.S.C. § 102(b) (2000), a broad right to exclude "use" would make no sense.

^{52.} See 17 U.S.C. § 106(5)-(6).

public performance right.⁵³ That limitation allows the owner of a lawful copy of a copyrighted work to publicly display it, directly or by projection, to viewers present at the place where the copy is located.⁵⁴ The idea is essentially the same as the aforementioned limitation on distribution control; the two can easily be considered together.⁵⁵

In essence, the concept of copyright exhaustion of rights ensures a reward has been obtained before imposing the constraint. The limitation attempts to serve all interests by equitably restricting copyright powers without severely limiting a copyright owner's economic opportunities.

B. Fair Use of Protected Property

The concept of "fair use" of intellectual property is born of the idea that some otherwise infringing uses are either so (1) socially significant or (2) economically insignificant to the property owner that allowing them to be enjoined by exclusive property rights is inappropriate. It is fair to say that these limitations are based in public policy, rather than an implicit license granted by the property owner as a result of a particular sale. Thus, fair use is broader than exhaustion or the first sale doctrine in that it is not linked to only one copy embodying the intellectual property right. At the same time, it is also narrower in that it applies only to uses of a particular character. Where it is clearly acknowledged, fair use has become an important limitation that is widely relied upon in a variety of circumstances. The same time is a source of the intellectual property right.

For the most part, fair use limitations are prevalent only in copyrights and trademarks. Traditionally, a greater public interest has ex-

^{53.} See 17 U.S.C. § 109(c).

^{54.} See id.

^{55.} It is clear that the limitation on the right to exclude public display is based on the same principle as the limitation on the right to control distribution. *See* H.R. REP. No. 94-1476, at 79–80 (1976) ("Section 109(c) adopts the general principle that the lawful owner of a copy of a work should be able to put his copy on public display without the consent of the copyright owner."). However, only the limitation of the right to control distribution is generally referred to as the "first sale" limitation. *See*, *e.g.*, BRUCE P. KELLER & JEFFREY P. CUNARD, COPYRIGHT LAW: A PRACTITIONER'S GUIDE § 4:1.3(A) (2001).

^{56.} In Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984), the Supreme Court eloquently explained that the "monopoly" conferred by the government in copyright or patents is not unlimited, but must take into account and balance the interests of authors and inventors with the interests of the public in the free flow of ideas, information, and commerce. The Constitution presumes that special circumstances, such as newly-developed technology, may upset this balance.

^{57.} The acknowledgement that the use of copyrighted material for a parody is fair use (in both the trademark and copyright context) is itself responsible for the success of a variety of entertainment productions, such as NBC's Saturday Night Live. *See* Elsmere Music, Inc. v. Nat'l Broad. Co., 623 F.2d 252, 253 (2d Cir. 1980) (considering a Saturday Night Live skit parodying the "I Love New York" song to be fair use); *see also* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994).

isted in carving out such limitations in these areas.⁵⁸ The reason may lie in the fact that copyrights and trademarks deal with communication and language.⁵⁹ Unlimited property rights on that landscape could conflict at some level with the protections of the First Amendment.⁶⁰ In that regard, limitations on copyright and trademark rights are arguably more important than similar limitations on patent rights. Nevertheless, commentators have argued that patent "fair use" limitations would also have an important place in the U.S. intellectual property system.⁶¹

The following discussion will focus on copyright fair use, and what little fair use does exist in patent law. As a contractual/licensing issue, trademarks are beyond the scope of this Article.⁶²

1. Fair Use of Copyrighted Materials

The idea that some fair uses of copyrighted property should exist has been an integral part of copyright law for some time. ⁶³ For years, the judiciary has considered a number of instances in which enforcement of a copyright owner's property rights seems unfair or unjust. ⁶⁴ These experiences and the corresponding development of the common law doctrine were reflected in Congress's eventual codification of fair use in § 107 of the 1976 Copyright Act. ⁶⁵ In this provision, copyright fair use is represented by a four-factored test that considers such questions as the "nature of the copyrighted work." ⁶⁶

^{58.} A specific reference to "fair use" exists in both the copyright and trademark statutes. See 17 U.S.C. § 107 (2000); 15 U.S.C. § 1125(c)(4)(A) (2000). No such reference to "fair use" explicitly or an analogous term is made in the Patent Act. See Maureen A. O'Rourke, Toward a Doctrine of Fair Use in Patent Law, 100 COLUM. L. REV. 1177, 1192 (2000).

^{59.} See O'Rourke, supra note 58, at 1196–98. Other possible reasons have been proposed, such as less need due to the lower transaction costs in licensing patents and the higher threshold for obtaining patent protection in the first place. See id.

^{60.} See, e.g., Moseley v. V. Secret Catalogue, Inc., 537 U.S. 418, 430 (2003) (stating that "fair use" limitations were added to the Anti-Dilution Act in consideration of First Amendment concerns); Eldred v. Ashcroft, 537 U.S. 186, 218–22 (2003) (noting that the fair use limitation is one of the safeguards on freedom of speech).

^{61.} See Cohen & Lemley, supra note 32, at 17–19 (noting that a fair use exception in patent law that would allow reverse engineering of software is necessary due to the current quirks in software patent disclosures).

^{62.} Trademark licensing is obviously a very important field, but challenges to license provisions that waive fair use limitations (assuming such licenses even exist) have not surfaced as a significant problem.

^{63.} See Jeff Sharp, Coming Soon to Pay-Per-View, 40 Am. Bus. L.J. 1, 7-8 (2002).

^{64.} The doctrine can be traced at least as far back as Justice Joseph Story's decision in *Folsom v. Marsh*, 9 F. Cas. 342, 348 (C.C.D. Mass. 1841), in which the articulation is surprisingly similar to that used today: "In short, we must often, in deciding questions of this sort, look to the nature and objects of the selections made, the quantity and value of the materials used, and the degree in which the use may prejudice the sale, or diminish the profits, or supersede the objects, of the original work."

^{65.} See 17 U.S.C. § 107 (2000).

^{66.} *Id*.

Although copyright fair use is now statutory in nature, its application is more ambiguous that this fact suggests. Unlike the specific and detailed exemptions and limitations on a copyright owner's exclusive rights that go on for page after page in subsequent statutory provisions in the Copyright Act,⁶⁷ the fair use limitation does not contain an exhaustive list of types of practices that may be considered fair use.⁶⁸ Rather, anything that fits within the factors may qualify. Moreover, the Supreme Court has indicated that the task of applying § 107 "is not to be simplified with bright-line rules, for the statute, like the doctrine it recognizes, calls for case-by-case analysis."⁶⁹ That broad application has allowed copyright fair use to apply to everything from parody⁷⁰ to reverse engineering of copyrighted software.⁷¹ Of course, those in academia understand how important fair use limitations are for teaching and research;⁷² without them, education in the United States would be very different.⁷³

Another interesting justification for copyright fair use that has been advanced is that some access to proprietary materials is necessary to obtain the optimum level of creativity.⁷⁴ In other words, the best way to "promote the Progress of Science"⁷⁵ is to limit the use of the copyright power in some instances.⁷⁶ This is based on the notion that creativity is an incremental process, with one work standing on

^{67.} See 17 U.S.C. §§ 108-112.

^{68.} According to the statute, some specific uses that may qualify include criticism, comment, news reporting, teaching, scholarship, or research. 17 U.S.C. § 107. However, the statute also indicates that the outcome of the four-factored analysis is determinative rather than the items in the list. *Id.*

^{69.} Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994).

^{70.} See id. at 574.

^{71.} See Atari Games Corp. v. Nintendo of Am., Inc., 975 F.2d 832, 843 (Fed. Cir. 1992).

^{72.} See Maureen Ryan, Fair Use and Academic Expression: Rhetoric, Reality and Restriction on Academic Freedom, 8 CORNELL J.L. & PUB. POL'Y 541, 569–76 (1999) (discussing in-depth whether fair use should have a "special vitality" in the academic context).

^{73.} Fair use is not a concept unique to the United States; it is also reflected in international agreements. See, e.g., The Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 13, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex IC, LEGAL INSTRUMENTS-RESULTS OF THE URUGUAY ROUND, 33 I.L.M. 81 (1994) [hereinafter TRIPS] (stating limitations and exceptions to copyright protection: "Members shall confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder."). The extent to which various international laws actually mirror fair use in the United State is another question, however. See Ruth Okediji, Toward an International Fair Use Doctrine, 39 COLUM. J. TRANSNAT'L L. 75, 92–114 (2000).

^{74.} See Sharp, supra note 63, at 5–7; see also Campbell, 510 U.S. at 574–76.

^{75.} U.S. CONST. art. I, § 8, cl. 8 ("The Congress shall have Power... 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").

^{76.} See Campbell, 510 U.S. at 574–76 ("From the infancy of copyright protection, some opportunity for fair use of copyrighted materials has been thought necessary to fulfill copyright's very purpose, 'to promote the Progress of Science and useful Arts...." (quoting U.S. CONST. art I, § 8, cl. 8)).

the shoulders of many previous works. If all access to previous works were to be completely within the control of copyright owners, it is conceivable that there would be less material available to underlie the creation of new works. This justification for fair use is intuitive; however, it has been argued that it is unsupported by the actual economics underlying intellectual property creation and use.⁷⁷

Courts have indicated that the absence of copyright power over fair uses of copyrighted material is just as much a part of the federal scheme as the enforceable rights.⁷⁸ In the absence of copyright protection, no state law can fill the gap;⁷⁹ for cases in which a state law touches upon an area of exclusive federal copyright control, the preemption doctrine comes into play.⁸⁰

Thus, copyright fair use rights occupy an important and secure place in the legal scheme of U.S. intellectual property law. Arguably, even Congress would have a difficult time altering that position significantly, and certainly if it were to do so a groundswell of protest would result.⁸¹

2. Experimental Use of Patented Inventions

While the phrase "fair use" is not actually used in patent law jurisprudence, there is at least one analogous limitation.⁸² The established doctrine known as "experimental use" is properly read as

^{77.} See R. Polk Wagner, Information Wants to Be Free: Intellectual Property and the Mythologies of Control, 103 COLUM. L. REV. 995, 998–99 (2003).

^{78.} See, e.g., Vault Corp. v. Quaid Software, Ltd., 847 F.2d 255, 269–70 (5th Cir. 1988); see also Nat'l Basketball Ass'n v. Motorola, Inc., 105 F.3d 841, 849–50 (2d Cir. 1997); United States ex rel. Berge v. Bd. of Trs. of the Univ. of Ala., 104 F.3d 1453, 1463 (4th Cir. 1997); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1453 (7th Cir. 1996).

^{79.} While this is certainly the case for all areas regulated by federal copyright law, state common law may provide protection in those extremely limited narrow circumstances wherein works of authorship are not covered. See 17 U.S.C. § 301(b) (2000). The primary example is works that are not "fixed in a tangible medium." 17 U.S.C. § 301(b)(1); see also H.R. Rep. No. 94-1476, at 129–33 (1976) ("On the other hand, section 301(b) explicitly preserves common law copyright protection for one important class of works: works that have not been 'fixed in any tangible medium of expression.""). It has been argued that copyright protection is broader than Section 301.

^{80. 17} U.S.C. § 301(a); see also Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225 (1964)

^{81.} Congress's enactment of the Digital Millennium Copyright Act ("DMCA") is a recent example of the reticence to alter fair use. See 17 U.S.C. § 1201(c) (2000) ("Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title . . ."). Many find that statement ineffective and inaccurate, and the DMCA provides an excellent example of the degree to which the public will react when there is an alleged circumscription of fair use. See, e.g., the virulent anti-DMCA materials at http://anti-dmca.org/ (last visited Nov. 25, 2003).

^{82.} Professor O'Rourke argues that a number of scope-limiting doctrines in patent law are similar to copyright fair use. *See* O'Rourke, *supra* note 58, at 1192–96. However, because fair use is not a limitation on the scope of the property right, but a defense to enforcement, Professor O'Rourke's analogies are probably overextended.

addressing some of the same rights and issues.⁸³ Experimental use is a common-law-based defense to patent infringement for acts "performed 'for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry.'"⁸⁴

The experimental use defense is construed "very narrowly." That fact was recently affirmed by the Federal Circuit in *Madey v. Duke University.* 86 *Madey* addressed the issue in the context of a nonprofit, academic institution. On appeal from a district court determination that offered protection to Duke University under the doctrine, the Federal Circuit reversed, finding that the district court applied an overly-broad conception of experimental use. 7 According to the Federal Circuit, focusing on whether an alleged infringer is seeking "commercial gain" is not appropriate. 88 The court indicated that actionable infringement is much broader, stating that "the profit or nonprofit status of the user is not determinative. 89 While *Madey* is in line with recent Federal Circuit precedent on experimental use and not all that surprising, it provides the clearest articulation to date that blanket defenses by colleges and universities based on their status as nonprofit, educational institutions will be unsuccessful. 90

However, there is a continuing notion that an experimental use defense in patent law still exists in limited circumstances.⁹¹ Although defendants who can take advantage of the defense appear to be substantially hypothetical, one must assume that such a defendant could

^{83.} See Integra Lifescis. I, Ltd. v. Merck, KGaA, 331 F.3d 860, 875 (Fed. Cir. 2003) (Newman, J. dissenting) (drawing a parallel between aspects of experimental use and copyright fair use).

^{84.} See Embrex, Inc. v. Service Eng'g Corp., 216 F.3d 1343, 1349 (Fed. Cir. 2000) (quoting Roche Prods., Inc. v. Bolar Pharm. Co., 733 F.2d 858, 863 (Fed. Cir. 1984)). Note that another, very narrow type of experimental use does exist in statutory patent law. The Drug Price Competition and Patent Restoration Act (commonly known as the "Hatch-Waxman Act") allows for experimental use of a patented invention if it is "solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products." 35 U.S.C. § 271(e)(1) (2000); Integra, 331 F.3d at 864–65. That narrow exception is not relevant in the present context because contractual waiver of the statutory right to experiment to develop drugs (usually by generic pharmaceutical companies) is likely quite rare, and in any case would probably face complicated antitrust barriers.

^{85.} Embrex, 216 F.3d at 1349.

^{86. 307} F.3d 1351 (Fed. Cir. 2002), cert. denied, 123 S. Ct. 2639 (2003).

^{87.} *Id.* at 1361.

^{88.} Id. at 1362.

⁸⁹ Id

^{90.} Such a strong statement may lead to efforts to legislatively overrule the decision. *See* Stephen Maebius & Harold Wegner, *Ruling on Research Exemption Roils Universities*, NAT'L L.J., Dec. 16, 2002, at C3 ("The [decision]...almost guarantees that in the 108th Congress there will be a reconsideration of earlier attempts to provide a statutory research exemption.").

^{91.} See Embrex, 216 F.3d at 1349; see also Semitool, Inc. v. Ebara Corp., CV 01-873-BR, 2002 U.S. Dist. LEXIS 21939, at *5-*6 (D. Or. Oct. 31, 2002) (recently noting the continued existence of the doctrine).

exist in the real world. If so, the interests in preserving the limitation on exclusive rights are certainly just as important as in other areas of the law. And if some commentators get their way and the defense is expanded, experimental use could become an even more important limitation. ⁹²

III. THE USE AND ENFORCEABILITY OF CONTRACTS TO CONSTRAIN INTELLECTUAL PROPERTY LIMITATIONS

With the above intellectual property limitations in mind, one might ask if such important legal doctrine and social policy can ever be compromised. Should the law allow for an individual to "waive" his or her freedom to use intellectual property in a manner not covered by the owner's exclusive rights? If so, what special requirements, if any, must exist for a waiver to be valid? Finally, if the use of waivers occurs in more than a few isolated incidents, how will such waivers affect our intellectual property system?

Clearly, the above questions implicate issues broader than federal intellectual property law. First and foremost, any discussion of legal waivers is necessarily going to call state contract law into play as well. Indeed, the answers require a complex melding of both the federal and state regimes. The right mix — one that will preserve the balance of the intellectual property system and the integrity of private contract — is not easily ascertained. Finding the right mix is essential because the substantial hobbling of either of the systems is simply not economically or socially acceptable.

The questions posed are not theoretical. Increasingly, contracts that extend or create proprietary rights on the use of information⁹³ are being associated with the sale of a variety of products like software.⁹⁴ Particularly troublesome, the less savvy party may accept these contracts quite passively, with little contemplation, let alone negotiation.⁹⁵ That suggests that if these contracts are causing an erosion of the public domain, it is occurring away from the public eye.

^{92.} See Rebecca S. Eisenberg, Patents and the Progress of Science: Exclusive Rights and Experimental Use, 56 U. CHI. L. REV. 1017, 1074–78 (1989).

^{93.} A nice sampling of "click-wrap" and "shrink-wrap" licenses is available on the website for the Consumer Project on Technology (started by Ralph Nader in 1995). See Consumer Project on Technology, CPTech's Survey of Current Shrinkwrap and Clickwrap Contracts, at http://www.cptech.org/ecom/ucita/licenses/ (last modified Jan. 31, 2003) [hereinafter CPTech's Survey].

^{94.} See Robert A. Hillman & Jeffrey J. Rachlinski, Standard Form Contracting in the Electronic Age, 77 N.Y.U. L. REV. 429, 431 (2002) ("Likely ninety-nine percent of paper contracts consist of standard forms, and now, with increasing alacrity, people agree to terms by clicking away at electronic standard forms on websites and while installing software ('clickwrap' contracts)." (footnotes omitted)).

^{95.} See id. at 436–37 (noting, in the context of form contracts in general, that consumers often have no interest in reading or understanding them).

A. Contractual Waiver in a Variety of Forms

Contracts that constrain or eliminate intellectual property right limitations could occur in a variety of circumstances and take several different forms. Theoretically, the most straightforward would be a simple, negotiated agreement not to use or disclose information that is otherwise available in exchange for some consideration. ⁹⁶ In reality, it is difficult to imagine the waiver as the primary subject matter of the contract due to the relatively low value of a waiver from a single contracting party compared to the transaction costs of contracting. ⁹⁷ Additionally, such a transaction might inflate the value of the waiver in the mind of the party agreeing to it, rendering the deal less attractive to the party seeking the waiver. ⁹⁸

More commonly, the contractual provisions in question would accompany the sale or licensing of a product that is the main subject matter of the agreement. In this way, one can elicit an agreement to waive a fair use or exhaustion-related intellectual property limitation as an ancillary (and even cloaked) part of the transaction. This strategy keeps the focus on the product that is the parties' main purpose for interacting in the first place. ⁹⁹ The waiver can be a separate licensing arrangement conditionally linked to the sale of an associated good, ¹⁰⁰ or a part of a license for the good itself. ¹⁰¹ In general, whether one characterizes the transaction as a conditioned sale or a license is probably not important for its enforceability, as they are basically the same for purposes of attaching contractual liability. ¹⁰²

^{96.} The consideration could take the form of a payment or it could be a promise to collaborate in the development of a product.

^{97.} In general, waivers such as these would be unlikely to be worth a great deal on an individual basis, because they involve uses of information that are not covered by an intellectual property right. *See* Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1326 (Fed. Cir. 2003) (referring to the damages arising from the breach of such an agreement as "de minimus [sic]"), cert. denied, 123 S. Ct. 2588 (2003). Potentially, the value of a collection of many such agreements would be greater due to network effects.

^{98.} See Hillman & Rachlinski, supra note 94, at 450–52 (noting that people may overestimate contracting risks).

^{99.} A common technique for avoiding focus on certain terms is to direct the contracting party's attention to less complex terms, such as price. See id.

^{100.} See, e.g., Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 708–09 (Fed. Cir. 1992) (allowing enforcement of a use restriction accompanying the sale of a patented apparatus for diagnosis and treatment of pulmonary disease).

^{101.} See, e.g., Specht v. Netscape Communications Corp., 306 F.3d 17, 23–25 (2d Cir. 2002) (detailing Netscape's attempt to provide consumers a license for its software product that also included waiver term).

^{102.} Note that there may be a difference if one intended to enforce an intellectual property right (as opposed to a contractual right to prevent another from exercising an intellectual property limitation). See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1450 (7th Cir. 1996) (acknowledging that legal differences between 'contracts' and 'licenses' may matter under the copyright doctrine of first sale). In the context of contracts dealing with intellectual property rights, one might be better off clearly stating that the transaction is a license, and ensuring that the restriction be tied to every authorized transfer of the good. See, e.g., Mi-

Essentially, contractual restrictions on use rights following a sale have the function of converting the sale into a licensing arrangement, actionable in breach if the conditions are not fulfilled. ¹⁰³

To simplify the contracting process, form contracts are often used, almost exclusively by the party offering the product and seeking the waiver.¹⁰⁴ Form contracts can provide a number of contracting efficiencies, such as eliminating inconsistencies in agreements between customers and reducing the amount of time required to create contracts.¹⁰⁵ However, the fact that negotiation is substantially removed from the contracting process can create additional costs, most of which fall on the non-drafting party.¹⁰⁶

An important modern trend has been to provide the form contract in a non-traditional format. A typical form contract is the "shrink-wrap" agreement, so called because some such agreements are printed on the shrink-wrap packaging surrounding a product, and opening the shrink-wrap evidences agreement. Other variations are possible, including simply applying a label with a licensing limitation to a product. The form contract can also be conveyed via electronic media, particularly when software is involved. A common variety of this type of contract is colloquially known as a "click-wrap" or "click-through" license, because the prospective licensee must click to indicate agreement or be deemed to have rejected it.

crosoft Corp. v. Harmony Computers & Elecs., Inc., 846 F. Supp. 208, 212–13 (E.D.N.Y. 1994). Of course, those same rights could be enforced in contract regardless of whether a first sale had occurred. *See* H.R. REP. No. 94-1476, 79 (1976) ("As in cases arising under section 109(a), [the right to display a particular copy accompanying first sale] does not mean that contractual restrictions on display between a buyer and seller would be unenforceable as a matter of contract law.").

103. It has been noted that a sale without additional conditions (i.e., a "first sale" situation) is not entirely unencumbered; the intellectual property limitations themselves can be viewed as statutorily-imposed conditions on the sale. *See* Nimmer, *supra* note 6, at 155–56.

104. See Lemley, Intellectual Property and Shrinkwrap Licenses, supra note 6, at 1241–

105. See Marcel Kahan & Michael Klausner, Standardization and Innovation in Corporate Contracting (or "The Economics of Boilerplate"), 83 VA. L. REV. 713, 719–29 (1997) (discussing, inter alia, the benefits of "drafting efficiency" and "network benefits").

106. See infra Part III.B.

107. See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).

108. See Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 703-09 (Fed. Cir. 1992).

109. For example, many electronic databases place restrictions on the use of the materials within by use of "browse-wrap" electronic agreements, notwithstanding fair use limitations. See LexisNexis Academic Universe, Terms and Conditions of Use for the LexisNexis Services, available at http://www.lexisnexis.com/terms/general/ & http://www.lexisnexis.com/terms/supplemental/ (last visited Nov. 25, 2003).

110. See Specht v. Netscape Communications Corp., 306 F.3d 17, 22 & n.4 (2d Cir. 2002).

111. The "wrap" part undoubtedly comes from the fact that "shrink-wrap" licenses entered the legal lexicon first and commentators wanted to use a term that suggested legal similarity, if not physical. *See ProCD*, 86 F.3d at 1449 (explaining the origin of the term "shrink-wrap").

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An example of a typical electronic form contract containing a fair use or exhaustion-related intellectual property limitation¹¹² is the enduser licensing agreement for the desktop computer software provided with the Palm Zire, a handheld PDA produced by Palm, Inc. ("Palm EULA").¹¹³ As with many such agreements, when software installation is initiated, a dialog box appears with the license text, stating in part:

SOFTWARE LICENSE AGREEMENT

CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS BEFORE USING THIS PRODUCT. IT CONTAINS SOFTWARE, THE USE OF WHICH IS LICENSED BY PALM, INC. ("PALM") TO YOU, THE ORIGINAL END USER, FOR YOUR USE ONLY AS SET FORTH BELOW. IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT, DO NOT USE THE SOFTWARE. USING ANY PART OF THE SOFTWARE INDICATES THAT YOU ACCEPT THESE TERMS.

* * *

LICENSE: Palm grants you a limited, nonexclusive license to use the accompanying software program(s) (the "Software") subject to the terms and restrictions set forth in this License Agreement. You are not permitted to use the Software in any manner not expressly authorized by this License. You acknowledge and agree that ownership of the Software and all subsequent copies thereof regardless of the form or media are held by Palm or its suppliers. 114

Note that the Palm EULA gives the purchaser two options: (1) agree and be bound by all of the terms in the license, or (2) reject the

^{112.} Other similar agreements can be viewed at the CPTech Website. See CPTech's Survey, supra note 93.

^{113.} The following discussion is not intended in any way to be a criticism of the licensing practices of Palm, Inc. The author candidly admits that he chose the Palm license as an example, not only because it is typical, but also because the author recently purchased a Palm Zire.

^{114.} Palm, Inc. End User Software License Agreement for Palm Desktop software 4.1 for Windows, installed from a compact disc included with a new Palm Zire (on file with the author), *available at* http://www.palm.com/us/support/downloads/windesk41SE_legal.html (last visited Nov. 25, 2003).

license and refrain from using the software. Of course, the second option is not really an option at all, because the software is necessary to get the full benefits of owning the Palm PDA. By forcing consumers to agree to a license after purchase but before use, Palm transforms a sale with some aspects of implied license into a pure license.

The Palm EULA is quite direct in its abolition of two of the aforementioned limitations on intellectual property rights: first sale and fair use rights related to copyright. The agreement states:

NO ASSIGNMENT; NO REVERSE ENGINEERING:

You may transfer the Software to another party if such party accepts the terms and conditions of this License Agreement. If you transfer the Software, you must at the same time either transfer all copies of the Software as well as the supporting documentation to the same party or destroy any such materials not transferred.

Modification, reverse engineering, reverse compiling, or disassembly of the Software is expressly prohibited. However, if you are a European Union ("EU") resident, information necessary to achieve interoperability of the Software with other programs within the meaning of the EU Directive on the Legal Protection of Computer Programs is available to you from Palm upon written request. 116

Clearly, Palm intends to use the agreement to retain control of its goods after the sale and to extend its property rights in unprotected information. If it were not for the contract, these interests would be unprotectable as a matter of federal law.

Despite the fact that any contracts purporting to erase intellectual property limitations seem to fly in the face of important statutory or common law rules, recent court cases have generally favored enforcement. The watershed case for these types of contracts was *ProCD*, *Inc. v. Zeidenberg*.¹¹⁷ In that case, the court considered the enforceability of a "shrink-wrap" license for a telephone directory computer database. The defendant purchased ProCD's database and

^{115.} On Palm, Inc.'s website, the Palm Desktop software is referred to as "essential software." Palm, Inc., Software for Handhelds and Smartphones, http://www.palm.com/us/software/(last visited Nov. 25, 2003).

^{116.} Palm, Inc. End User Software License Agreement for Palm Desktop software 4.1 for Windows, *supra* note 114.

^{117. 86} F.3d 1447 (7th Cir. 1996).

began using it for commercial purposes, which was a direct violation of one of the licensing terms on the "shrink-wrap" license (also referred to in the case as an end-user agreement). The court's decision, authored by Judge Easterbrook, held that such agreements were enforceable. The court noted that licenses like the kind used by ProCD were analogous to warranties in consumer goods or information accompanying pharmaceutical prescriptions. The nature of the transaction was efficient, according to the court, as it allowed ProCD to use price discrimination to recoup its costs from those who commercial users who could afford to pay a higher price while making its database available to the general public to a at a lower price. 120

Since the *ProCD* case, many other courts have followed the Seventh Circuit's lead in enforcing "shrink-wrap" or "click-wrap" contracts. ¹²¹ Additionally, the concept has been applied more broadly and in different contexts. In *Mallinckrodt, Inc.* v. *Medipart, Inc.*, ¹²² the Federal Circuit upheld a patent licensing restriction that eliminated patent exhaustion rights when the license took the form of a mere label applied to the product. In general, as long as the limitations on use are communicated as part of a transaction ¹²³ and assent is required, ¹²⁴ courts have generally been willing to grant effect to them. ¹²⁵

^{118.} Id. at 1455.

^{119.} Id. at 1451.

^{120.} See id. at 1450.

^{121.} See, e.g., Bowers v. Baystate Techs., Inc., 320 F.3d 1317 (Fed. Cir. 2003), cert. denied 123 S. Ct. 2588 (2003); Register.com v. Verio, Inc., 126 F. Supp. 2d 238 (S.D.N.Y. 2000) (enforcing a variant of the "click-wrap" license known as the "browse-wrap"); Caspi v. Microsoft Network LLC, 732 A.2d 528 (N.J. Super. Ct. App. Div. 1999) (enforcing a forum selection clause in an online agreement for the Microsoft Network); Brower v. Gateway 2000, Inc., 676 N.Y.S.2d 569, 570 (N.Y. App. Div. 2001) (enforcing an arbitration clause in an agreement included in the packaging for Gateway computers that stated "By keeping your Gateway 2000 computer system beyond thirty (30) days after the date of delivery, you accept these Terms and Conditions."); Hill v. Gateway 2000 Inc., 105 F.3d 1147 (7th Cir. 1997) (Easterbrook, J.) (enforcing an arbitration clause in an agreement included in the packaging for Gateway computer); Groff v. Am. Online, Inc., No. PC 97-0331, 1998 WL 307001 (R.I. Super. Ct. May 27, 1998) (enforcing a forum selection clause in an America Online "click-wrap" agreement); see also Kunz, supra note 7.

^{122. 976} F.2d 700, 703-09 (Fed. Cir. 1992).

^{123.} See Softman Prods. Co. v. Adobe Sys. Inc., 171 F. Supp. 2d 1075, 1087–88 (C.D. Cal. 2001) (refusing to enforce an electronic software end-user license agreement against a company that acquired, but never loaded the software).

^{124.} See Specht v. Netscape Communications Corp., 306 F.3d 17, 32 (2d Cir. 2002) (refusing to enforce a Netscape license which did not require assent from a user downloading a copy of the Netscape software).

^{125.} See, e.g., B. Braun Med. Inc. v. Abbott Labs., 124 F.3d 1419, 1426 (Fed. Cir. 1997) ("This exhaustion doctrine, however, does not apply to an expressly conditional sale or license. In such a transaction, it is more reasonable to infer that the parties negotiated a price that reflects only the value of the 'use' rights conferred by the patentee. As a result, express conditions accompanying the sale or license of a patented product are generally upheld.").

B. The Question of Adhesion Contracts

While "shrink-wrap," "click-wrap," "browse-wrap," or label licenses are by no means the sole source of the controversy regarding waiver of intellectual property limitations (any contracting form can have the same effect), they do present special issues. As mentioned above, they are widely used because they provide efficiencies in contracting; however, additional costs may outweigh those efficiencies if the prospect of real negotiation and legal assent becomes so remote that the contract is one of "adhesion."

An adhesion contract is one of "boiler plate" form that is offered by one party on a take-it-or-leave-it basis. 126 It offers no option for the receiving party to change the terms, he can only walk away. 127 Clearly, many members of the "click-wrap," and so forth, family of licenses fall into this category. 128 Adhesion contracts are not necessarily unenforceable; 129 courts weigh the relative unfairness of the contract in making that decision, and tend to bar only those that "offend public norms." 130 Most important is the doctrine of unconscionability, which looks to issues such as unequal bargaining positions of the parties or one party's use of high pressure sales tactics to secure the agreement (procedural unconscionability) and the presence of unduly oppressive or manifestly unfair contract terms (substantive unconscionability). 131 If a "shrink-wrap," "click-wrap," or label license is

^{126.} See Todd D. Rakoff, Contracts of Adhesion: An Essay in Reconstruction, 96 HARV. L. REV. 1174, 1176–77 (1983); Batya Goodman, Honey I Shrink-Wrapped the Consumer: The Shrink-Wrap Agreement as an Adhesion Contract, 21 CARDOZO L. REV. 319, 324 (1999).

^{127.} See Rakoff, supra note 126, at 1177; see also Fuentes v. Shevin, 407 U.S. 67, 95 (1972)

^{128.} See Goodman, supra note 126, at 326-27.

^{129.} See, e.g., Guthmann v. La Vida Llena, 709 P.2d 675, 678 (N.M. 1985) ("A court will refuse to enforce an adhesion contract or a provision thereof only when the contract or provision is unfair."); Lytle v. CitiFinancial Servs., Inc., 810 A.2d 643, 658 (Pa. Super. Ct. 2002) ("Even where a contract is found to be a contract of adhesion, the terms of the contract must be analyzed to determine whether the contract as a whole, or specific provisions of it, are unconscionable."); Graham v. State Farm Mut. Auto. Ins. Co., 565 A.2d 908, 912 (Del. 1989) ("The fact that a contract is adhesive does not give rise to a presumption of unenforceability.").

^{130.} See Hillman & Rachlinski, supra note 94, at 454–56. Hillman & Rachinski explain that courts have developed three sources to curb the abuse from offensive adhesion contracts: (1) the unconscionability doctrine, (2) the Restatement (Second) of Contracts § 211(3) (concerning bother parties' knowledge of all contract terms), and (3) the doctrine of reasonable expectations. *Id.* at 456.

^{131.} See, e.g., In re Estate of Friedman, 64 A.D.2d 70, 84–85 (N.Y. App. Div. 1978) (providing an overview of the rationale for and various factors considered in determining unconscionability); Hillman & Rachlinski, supra note 94, at 456–58. However, it has been noted that the doctrine of unconscionability, as a theory, lacks substantive focus. See Raymond T. Nimmer, Contract Law in Electronic Commerce, 587 PLI/PAT 1127, 1164 (2000).

deemed an unconscionable adhesion contract, a court may find the offending license or term unenforceable. 132

In addition to the relative conscionability of an adhesion contract, the timing can be an important factor in deciding whether to enforce it. If associated with a transfer of goods, courts have referred to the Uniform Commercial Code ("UCC") provisions regarding the so-called "battle of the forms" to find an adhesion contract tendered after goods have been paid for and received to be a mere proposal for additional terms that must be expressly accepted by non-merchants. 134 Other courts have found that such a contract is enforceable as long as the receiving party had a chance to reject it. 135 The issue is obviously eliminated if the terms are incorporated into the original sales contract. 136

But aside from the enforceability questions and the broader objective fairness or unfairness of an adhesion contract, these agreements have certain additional qualities in the context of "shrink-wrap," "click-wrap," and label licenses that are worth considering. These qualities are important in understanding the economic efficiencies of the various performance options held by the parties to the contract. First, the non-drafting party has very little ability to obtain information about the meaning of the terms or the value of various provisions to the drafting party, in part because the parties are usually at a considerable distance from each other. 137 Without a negotiation — or at least a face-to-face conversation with another human — the nondrafting party is left to assume that all provisions in the contract are of equal importance. Second, the non-drafting party is often not compelled to read the contract. Before using the underlying product or software, the licensee must simply pass through an annoying barrier (packaging, dialog boxes, etc.). ¹³⁸ Finally, if a contingency occurs that

^{132.} See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1448 (7th Cir. 1996) ("Shrinkwrap licenses are enforceable unless their terms are objectionable on grounds applicable to contracts in general (for example, if they violate a rule of positive law, or if they are unconscionable)."). But see DeJohn v. The TV Corp., Int'l, 245 F. Supp. 2d 913, 919–20 (N.D. Ill. 2003) (suggesting that "click-wrap" agreements would rarely be considered unconscionable adhesion contracts because clicking the "I agree" button does not constitute "high pressure tactics or deceptive language in the contract").

^{133.} U.C.C. § 2-207 (1992).

^{134.} See Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91, 105 (3d Cir. 1991) (refusing to enforce a "box-top" license because it was a proposal for additional terms that had to be expressly accepted); Klocek v. Gateway, 104 F. Supp. 2d 1332, 1339–41 (D. Kan. 2000). But see ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1452 (7th Cir. 1996) (determining that the "battle of the forms" provision was irrelevant since there was only one form).

^{135.} See, e.g., Hill v. Gateway 2000 Inc., 105 F.3d 1147, 1150 (7th Cir. 1997).

^{136.} See U.C.C. § 2-204 (1992).

^{137.} See Hillman & Rachlinski, supra note 94, at 479–80.

^{138.} For example, many electronic contracts are presented in a scrolling dialog box which must be manipulated to reveal the entire contract text. *See, e.g.*, Palm, Inc. Software License Agreement for Palm Desktop software 4.1 for Windows, *available at*

affects performance, adhesion contracts are particularly difficult to renegotiate since the non-drafting party is generally given no information on how or with whom a renegotiation could take place (or that it is even an option). ¹³⁹

C. Federal Preemption

No matter what state contract law dictates as to the enforceability of agreements that alter baseline intellectual property protection schemes, the prospect of federal preemption remains. The preemptive power of federal law is derived from the U.S. Constitution, ¹⁴⁰ but it is also reflected in specific federal intellectual property statutes. ¹⁴¹ The power clearly prohibits states from enacting conflicting law or from providing rights or protections in an area strictly governed by federal law, ¹⁴² but it has an unclear application in the context of contract law. This has been the subject of several commentaries. ¹⁴³ Some such commentaries argue for at least limited contract preemption, pointing to the need for the preservation of unencumbered use of unprotected materials as a necessary component of the complete system. ¹⁴⁴

In the context of copyright law, whether a contract will be upheld seems to depend on whether a state law cause of action involves an "extra element" beyond simple copying, preparation of derivative works, and other activities governed under the federal statute. While it is not clear that private contracts always provide that "extra element," most recent decisions suggest that courts are willing to

http://www.palm.com/us/support/downloads/windesk41SE_legal.html (last visited Nov. 25, 2003). One can often access the desired product without reading the entire contract. *See id.*

^{139.} See Hillman & Rachlinski, supra note 94, at 479–80.

^{140.} U.S. CONST., art VI, § 1, cl. 2.

^{141.} See, e.g., 17 U.S.C. § 301(a) (2000) (making clear that federal law was to be the exclusive source of copyright protection).

^{142.} These are known as "conflict" and "field" preemption, respectively. *See* English v. Gen. Elec. Co., 496 U.S. 72, 78–79 (1990); *see also* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 152 (1989) ("[O]ur past decisions have made clear that state regulation of intellectual property must yield to the extent that it clashes with the balance struck by Congress in our patent laws.").

^{143.} See, e.g., Koffsky, supra note 6, at 1177–87; Rice, supra note 6, at 574–77; JAY DRATLER, JR., LICENSING OF INTELLECTUAL PROPERTY § 1.06[2] (2003).

^{144.} See, e.g., David Nimmer et al., The Metamorphosis of Contract into Expand, 87 CAL. L. REV. 17, 63–68 (1999); Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, supra note 6, at 137–42.

^{145.} See, e.g., Computer Assoc. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 716 (2d Cir. 1992); ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996); Bowers v. Baystate Techs., Inc., 320 F.3d 1317 (Fed. Cir. 2003), cert. denied, 123 S. Ct. 2588 (2003) (noting that the "extra element" of a state law claim must establish a qualitative variance between the rights protected by federal copyright law and those protected by state law in order to avoid preemption).

^{146.} See Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 269-70 (5th Cir. 1988).

enforce most contracts in this area. ¹⁴⁷ Judicial treatment of contract preemption in the context of patents is less common; ¹⁴⁸ courts have generally allowed contractual restraint without comment on the preemption issues. ¹⁴⁹

Given the above-noted trend toward enforceability, preemption has not, to date, emerged as a substantial hurdle to contractual recapture of patent or copyright limitations. In fact, the subject probably takes a back seat to other formation issues that arise in the assessment of such contracts. Thus, it would seem important to analyze the contracts' actual effects, since it is the effects of the enforced contracts that will shape the future legal environment in this area.

IV. THE EFFECT OF ENFORCING THE WAIVER: A CONSIDERATION OF CONTRACT ALTERNATIVES PLACES THE CONSTRAINTS IN CONTEXT

In assessing the propriety of a particular contract regime, most commentators focus on formation issues rather than the consequences of enforceability. Whether particular types of contracts should be enforced is answered by looking to such factors as the existence of mutual assent and the absence of unconscionable terms. The outcome of a given contractual relationship is generally perceived as irrelevant as long as the rules are properly applied. Criticism abounds if doctrine is ignored or rules conflict. But what is often overlooked is the fact that contractual rules and doctrine are not created in a vacuum; they are based in the desire to achieve fair results in the real world. At some level, the outcome actually is important. It is perhaps then more

^{147.} See, e.g., Bowers, 320 F.3d at 1324–26; Wrench LLC v. Taco Bell Corp., 256 F.3d 446, 455–59 (6th Cir. 2001), cert. denied, 534 U.S. 1114 (2002); Nat'l Car Rental Sys., Inc. v. Computer Assocs. Int'l, Inc., 991 F.2d 426, 433 (8th Cir. 1993); Taquino v. Teledyne Monarch Rubber, 893 F.2d 1488, 1501 (5th Cir. 1990); Acorn Structures v. Swantz, 846 F.2d 923, 926 (4th Cir. 1988). But see Lipscher v. LRP Publishers, Inc., 266 F.3d 1305, 1312 (11th Cir. 2001).

^{148.} Since patent owners enjoy broader rights than owners of other intellectual property, they may be less inclined to seek additional protections through contract. *See* Lemley, *Beyond Preemption, supra* note 6, at 126–28.

^{149.} See Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 703–09 (Fed. Cir. 1992); Gen. Talking Pictures Corp. v. W. Elec. Co., 305 U.S. 124, 127 (1938).

^{150.} Courts may also invalidate a contract concerning unprotected uses of intellectual property on the grounds of copyright or patent misuse. *See* Lemley, *Beyond Preemption*, *supra* note 6, at 151–57.

^{151.} Even when a court's decision may appear to stem from the "conscience-shocking" result of enforcing an agreement, holdings often turn on the implied lack of true assent due to the unequal bargaining positions of the parties. See, e.g., Jones v. Star Credit Corp., 298 N.Y.S.2d 264, 266 (N.Y. Sup. Ct. Spec. Term 1969) (noting that "[t]he law is beginning to fight back against those who once took advantage of the poor and illiterate without risk of either exposure or interference").

constructive to consider the real world *consequences* of enforceability in assessing the existing contractual regime and possible reforms.

Determining contract consequences involves an overall assessment of what each party is ultimately accountable for as a result of entering into the contract. Since parties to a contract always have the choice between performance and breach, 152 the consequences of making a given agreement enforceable depend on not only the effect of both parties performing, but also on how remedies will be extracted in the case of a breach. Modern contract remedies suggest that the primary intent of the law is not to morally bind individuals, but rather to ensure an economic consequence exists if a contractual promise is broken. 154

In practice, how does a party choose between breach and performance? From an economic perspective, each party should choose the option that maximizes their wealth. Many argue that society should actually encourage that choice if it leads to an increase in overall economic efficiency. Under this view, harsh (i.e., overly burdensome and unexpected) consequences would suggest inappropriate rules whereas minor consequences would suggest well-functioning regimes. For example, if one has the ability to avoid unpalatable contractual terms by paying only minor damages, perhaps the overall contractual regime is acceptable. ¹⁵⁵ An in-depth consideration of contract options and remedies in the context of licenses that eradicate patent and copyright limitations is therefore necessary to determine whether these mechanisms will actually produce the parade of horribles that some fear.

A. Efficient Performance and Efficient Breach: An Economic Perspective on Contracts

How can breaching a contract ever be the right thing to do? The legal system uses rules for remedies that encourage parties to a contract to choose between breach and performance in a way that most

^{152.} Of course, some legal theorists would argue that breach should not be viewed as an "option," as it requires breaking a promise made to the other contracting party. See, e.g., Joseph M. Perillo, Misreading Oliver Wendell Holmes on Efficient Breach and Tortious Interference, 68 FORDHAM L. REV. 1085, 1085–91 (2000) (demonstrating that even Justice Holmes, ostensibly an original proponent of this "choice," did not believe breach was an equally acceptable alternative to performance).

^{153.} Clearly, there are also different categories of breach, e.g., types of substantial performance, material breach, etc. These gradations can be important for determining the specific remedy afforded. *See, e.g.*, U.C.C. §§ 2-702–2-710 (1992).

^{154.} It has been argued that contract remedies have an inherent moral basis that underlies the economic scheme. *See* Henry Mather, *Searching for the Moral Foundations of Contract Law*, 47 AM. J. JURIS. 71, 76–77 (2002) (arguing that expectation damages should be viewed as based on general moral principles, such as avoiding harm to other persons).

^{155.} Of course, it is in the best interests of society for the contract to be breached only if this action maximizes overall economic efficiency.

benefits society. Law and Economics theory argues that the application of rules that secure the optimal commitment to performance should be favored.¹⁵⁶ Liability rules that encourage too much investment or commitment to performance in relation to the benefit conferred are "inefficient" in that they do not reflect the true cost of performance or breach.¹⁵⁷ Alternatively, rules that encourage too little investment or commitment to performance are inefficient because they tend to externalize the costs of a breach. From these precepts comes the notion that there is an optimal level of commitment to performance that will encourage the parties to perform when it is efficient, and to forego performance (i.e., breach) when performance is inefficient.¹⁵⁸ These ideas are less radical than they sound, and they work well with much of the existing framework of contract law.¹⁵⁹

However, implicit in the theory is the fact that the non-breaching party's benefits can be quantified and compensated through use of a liability rule. ¹⁶⁰ In that case, breach of an inefficient contract results in the non-breaching party being compensated to indifference, while the breaching party retains enough of the cost savings to come out ahead. In other words, the theory of efficient breach suggests that both parties come out as well or better off than if the contract had been per-

156. See, e.g., COOTER & ULEN, supra note 13, at 189; RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 29 (5th ed. 1998) (promoting the concept of economic efficiency as a goal for legal rules). While Law and Economics theories have never threatened to replace traditional doctrine in a wholesale manner, in certain aspects of the law that depend on economic analysis, the work has made a significant impact. See Eric A. Posner, Economic Analysis of Contract Law After Three Decades: Success or Failure?, 112 YALE L.J. 829, 869–70 (2003); see also POSNER, ECONOMIC ANALYSIS OF LAW, supra, at 43 (noting that "the economist experiences no sense of discontinuity in moving from physical to intellectual property. In particular, the dynamic rationale for property rights is readily applied to the useful ideas that we call inventions.").

157. This assumes that the breaching party would have to pay damages sufficient to account for the loss in expected benefits to the other side. Thus, the *optimal* level of commitment to performance is when the costs of breach are completely internalized by the breaching party. *See* COOTER & ULEN, *supra* note 13, at 190.

158. This is a basic Law and Economics concept. Simply stated, for a situation involving a contract between two parties, the "promisor" and the "promisee," two efficient outcomes are possible depending on the costs: (1) if the promisor's cost of performing is greater than the promisee's benefit from performing, it is efficient for the promisor to breach; and (2) if the promisor's cost of performing is less than the promisee's benefit from performing, it is efficient for the promisor to perform. *See id.*

159. In some circumstances, Law and Economics theory appears to run counter to traditional contract notions of adhering to one's promises. *See, e.g.*, Patton v. Mid-Continent Sys., 841 F.2d 742, 750 (7th Cir. 1988) (Posner, J.) ("Even if the breach is deliberate, it is not necessarily blameworthy. The promisor may simply have discovered that his performance is worth more to someone else. If so, efficiency is promoted by allowing him to break his promise, provided he makes good the promisee's actual losses. If he is forced to pay more than that, an efficient breach may be deterred, and the law doesn't want to bring about such a result.").

160. See COOTER & ULEN, supra note 13, at 190. But see Perillo, supra note 152, at 1104–06 (stating that in many cases the law treats contracts more like property rights, enforcing them out of an interest in "preserving the public peace" and instilling trust).

formed. 161 Interestingly, although the concept can be applied to many different types of common law contract remedies, Law and Economics theory predicts that the most efficient type of remedy is the one most commonly used in traditional contract law: expectation damages. 162

Assuming the parties negotiated a fair and reasonable contract, how does an efficient breach situation come to pass? Generally speaking, it exists when some condition occurs *subsequent* to the contract that changes the costs of performance for one of the parties. ¹⁶³ For example, one party's costs of performance could increase, making the performance of the contract more expensive than breach. Similarly, one of the parties might retain an increased benefit from breaching the contract, once again making the performance of the contract more expensive than breach.

To achieve economically efficient results, a theory like efficient breach relies on the conception of "perfect contracts." Perfect contracts are "complete," in that they anticipate every contingency and all relevant information is communicated between the parties. Additionally, perfect contracts are "efficient," in that resources and risks are allocated to the party that can value and bear it, respectively. Obviously, absolutely perfect contracts do not exist in the real world. Certain market conditions such as individual irrationality and transaction costs can erode completeness and efficiency. The effects of this loss of completeness and efficiency can often be lessened if breach is permitted. However, due to high information and transaction costs not every contracting situation can be resolved by efficient breach.

B. Determining Whether Breach Is Preferred Requires an Assessment of the Likely Remedies

To determine whether to breach, one must comprehend at least the general landscape of the contract remedies that are likely to apply. The established remedies — that is, remedies applied by courts or required by statute for breach of contract — vary by contract type. ¹⁶⁵ Additionally, even within a specific contract type, there is often a

^{161.} See COOTER & ULEN, supra note 13, at 190.

^{162.} See id.; POSNER, supra note 156, at 133-35; infra Part IV.B.

^{163.} See COOTER & ULEN, supra note 13, at 238-44.

^{164.} See id. at 205-10.

^{165.} Consider that, while specific performance is not available at all for breach of a contract for services, see RESTATEMENT (SECOND) OF CONTRACTS § 344 (1981) [hereinafter RESTATEMENT], it is not an uncommon remedy in contracts for the transfer of real property interests, see MILTON R. FRIEDMAN ON CONTRACTS & CONVEYANCES OF REAL PROPERTY § 12.1(b) (6th ed. 1998).

choice of one or more of several possible remedies.¹⁶⁶ From that somewhat variable scheme, however, it is possible to discern some basic operating rules that give guidance on the likely remedies available for breach of a license term concerning unprotected information or protected intellectual property.

First, because the contracts at issue are often associated with goods, ¹⁶⁷ it is useful to note how the UCC fits into the analysis. Strictly speaking, license terms regarding the use of information do not themselves concern goods. ¹⁶⁸ Although all forms of intellectual property are recognized to have the basic attributes of personal property, ¹⁶⁹ they are unlike personal property in that they have no corporeal form, ¹⁷⁰ existing in the intellect only. This is true even if the intellectual property can be embodied in a particular product ¹⁷¹ — the intellectual property itself remains separate. ¹⁷² Therefore, intellectual property or other information cannot be a "good" as defined by the UCC. ¹⁷³ The remedies for breach of a pure intellectual property license must therefore be based in the common law of contracts. ¹⁷⁴

^{166.} For example, the UCC does not require that a non-breaching party "elect" a particular remedy. See U.C.C. §§ 2-703, 2-711 (1992). Rather, the UCC allows that party to collect any remedy for which he or she qualifies.

^{167.} See supra Part III.A.

^{168.} See Nimmer, supra note 131, at 1134.

^{169.} See, e.g., 35 U.S.C. § 261 (2000) ("[P]atents shall have the attributes of personal property."); 17 U.S.C. § 201(d)(1) (2000) ("The ownership of a copyright may be transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession."); J. THOMAS MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 6:4 (4th ed. 2003) ("That there are many common characteristics of patents, trademarks and copyrights cannot be denied. They all share the attributes of personal property, and are referred to en masse as [']intellectual property' or 'proprietary rights.'"); RAYMOND T. NIMMER, INFORMATION LAW § 5.3 (2000) (describing trade secrets as property).

^{170.} See COOTER & ULEN, supra note 13, at 126-29.

^{171.} For example, a patent on a new windshield wiper design may be embodied in a wiper having that design. See, e.g., U.S. Patent No. 6,513,185 (issued Feb. 4, 2003).

^{172.} This is the basis of the general rule that the sale of a copy embodying intellectual property does not include the sale of all of the intellectual property rights. *See supra* note 15. Although obvious in some situations, it can have some unusual results in others. For example, when an artist creates and sells the painting (which is then covered by copyright), a purchaser does not automatically obtain the right to publicly display the painting except "directly or by the projection of no more than one image at a time, to viewers present at the place where the copy is located." *See* 17 U.S.C. § 109(c) (2000). This is without regard to the fact that the painting is the only copy of the work and the artist has no ability to exercise a reserved right of public display. *See id.*

^{173.} See U.C.C. § 2-105 (1992) ("(1) 'Goods' means all things (including specially manufactured goods) which are movable at the time of identification to the contract for sale other than the money in which the price is to be paid, investment securities (Article 8) and things in action. 'Goods' also includes the unborn young of animals and growing crops and other identified things attached to realty as described in the section on goods to be severed from realty.'').

^{174.} Note that some courts have held that the sale of *software* is the sale of a good within the meaning of the UCC. *See, e.g.*, Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 676 (3d Cir. 1991); Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91, 99–100 (3d Cir. 1991);

Interestingly, the fact that intellectual property and other intangible information may be sold and licensed like any other physical article, but are not covered by well-established and uniform rules like the UCC has been a bone of contention for quite some time. ¹⁷⁵ In an effort to change the situation and add a bit of uniformity, the National Conference of Commissioners on Uniform State Laws has proposed an amendment to the UCC, known as the Uniform Computer Information Transactions Act ("UCITA"), that would cover transactions involving intangible property in the form of "computer information." ¹⁷⁶ This endeavor has been stalled due to protests that the default provisions unfairly favor licensors, ¹⁷⁷ as well as a general dissatisfaction with the complex wording of the model statute. ¹⁷⁸ Currently, only two states, Virginia and Maryland, have adopted any form of UCITA. ¹⁷⁹

This is not to say that the UCC has no relevance whatsoever to any transactions that may involve intellectual property rights. Because intellectual property can be embodied in a "good" representing an authorized copy of the property, some form of license (implied or express) for the use of the intellectual property must be included with the sale or license of the good. ¹⁸⁰ In fact, it is possible that a court may find the license relating to intellectual property to be part of the UCC contract for the sale of the good. For example, courts addressing the viability of so-called "shrink-wrap" or "click-wrap" licenses for software products have looked to the UCC to determine whether agreements limiting copyright fair uses were actually part of the overall agreement, or merely additional terms proposed, but not accepted. ¹⁸¹

Downriver Internists v. Harris Corp., 929 F.2d 1147, 1150 (6th Cir. 1991). But see generally Lorin Brennan, Why Article 2 Cannot Apply to Software Transactions, 38 DUQ. L. REV. 459 (2000). In these cases, the courts are distinguishing the single copy of software from the intellectual property right protecting the software. See generally Bonna Lynn Horovitz, Note, Computer Software as a Good Under the Uniform Commercial Code: Taking a Byte Out of the Intangibility Myth, 65 B.U. L. REV. 129 (1985).

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^{175.} See Carlyle C. Ring, Jr., Uniform Rules for Internet Information Transactions: An Overview of Proposed UCITA, 38 DUQ. L. REV. 319, 320–23 (2000).

^{176.} See generally UNIFORM COMPUTER INFORMATION TRANSACTIONS ACT (Aug. 23, 2001), available at http://www.law.upenn.edu/bll/ulc/ucita/ucita01.htm.

^{177.} See Computer Professionals for Social Responsibility, UCITA Fact Sheet, available at http://www.cpsr.org/program/UCITA/ucita-fact.html (last visited Nov. 25, 2003).

^{178.} See, e.g., AMERICAN BAR ASSOCIATION WORKING GROUP REPORT ON THE UNIFORM COMPUTER INFORMATION TRANSACTIONS ACT (UCITA) 7–9 (2002), available at http://www.abanet.org/leadership/ucita.pdf.

^{179.} See DRATLER, supra note 143, § 1.06[1], nn.17.28 & 17.29.

^{180.} In fact, this is the basis of the first sale doctrine. See supra Part II.A.; see also U.C.C. § 2-312(3) (1992).

^{181.} See, e.g., ProCD Inc. v. Zeidenberg, 86 F.3d 1447, 1448 (7th Cir. 1996). For cases involving software generally, see Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 674–76 (3d Cir. 1991) (finding a contract for delivery of hardware, software, and services subject to UCC); Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91, 99–100 (3d Cir. 1991); Downriver Internists v. Harris Corp., 929 F.2d 1147, 1150 (6th Cir. 1991); Triangle Underwriters, Inc. v. Honeywell, Inc., 604 F.2d 737, 742–43 (2d Cir. 1979) (finding a contract for sale of turnkey computer system was one for sale of goods); RRX Indus, Inc. v. Lab-Con,

However, even if the UCC applies, it is important to keep in mind that a licensor will not be restricted to UCC *remedies* for such an ancillary license. The UCC explicitly states that "[r]emedies for breach of any obligation or promise collateral or ancillary to a contract for sale are not impaired by the provisions of this Article." Thus, non-statutory contract (and non-contract) remedies will remain available.

Left with only the common law rules, the process of determining the scope of available remedies becomes somewhat murky. And, of course, the rules can differ from jurisdiction to jurisdiction. There are, however, basic propositions that provide useful guidelines.

The best starting point is to consider the most common legal remedy for contract breach: monetary damages. There is a widely-followed proposition that contract damages should attempt to place the non-breaching party in the position the party would have been in if the breach had not occurred and the contract has been performed. Commonly referred to as "expectation" damages, this remedy ensures that the non-breaching party will receive what he or she expected from the original bargain.

Not surprisingly, the method of calculating contract expectation damages depends on the specific body of law applied to the case. A general guideline for determining such damages is provided by the Restatement (Second) of Contracts. According to the Restatement:

the injured party has a right to damages based on his expectation interest as measured by

- (a) the loss in the value to him of the other party's performance caused by its failure or deficiency, plus
- (b) any other loss, including incidental or consequential loss, caused by the breach, less

Inc., 772 F.2d 543, 546 (9th Cir. 1985) (finding the UCC applied to contract for supply of computer software).

^{182.} U.C.C. § 2-701 (1992).

^{183.} Noted scholar and judge Richard Posner describes the available remedies for breach of contract as a "bewildering variety of possibilities." POSNER, *supra* note 156, at 130.

^{184.} RICHARD A. LORD, WILLISTON ON CONTRACTS § 64:1 (4th ed. 2002) [hereinafter WILLISTON] ("The primary if not the only remedy for injuries caused by the nonperformance of most contracts is an action for damages for the breach").

^{185.} See id.; see also RAYMOND T. NIMMER, INFORMATION LAW § 11.156 (1996).

^{186.} See RESTATEMENT, supra note 165, § 347; 3 ALLAN E. FARNSWORTH, FARNSWORTH ON CONTRACTS § 12.1 (2d ed. 1998); WILLISTON, supra note 184, § 64:2.

(c) any cost or other loss that he has avoided by not having to perform. ¹⁸⁷

The basic formula essentially attempts to account for the benefit the licensor would have received from the contract minus any expenses he or she would have incurred in performance.

According to basic contract doctrine, two relevant and important limitations exist on this damages assessment. Most important, the damages must be foreseeable. This is especially important in the case of consequential damages. If the breaching party could not have reasonably foreseen that the non-breaching party would have incurred certain damages as a consequence of the breach, such damages are not recoverable. Additionally, the damages must be reasonably certain. As a general rule, purely speculative contract damages are not permitted. In parely speculative contract damages are not permitted.

In the case of a contract to forego the right to use information unprotected due to copyright or patent limitation, the promisee's obligation might best be described as a "negative promise." In that case, the measure of expectation damages for breach may be the profits the plaintiff would have made but for the defendant's breach (i.e., "lost profits"). 193

As an alternative, when expectation damages cannot be assessed with reasonable certainty, courts may assess the damages the non-breaching party incurred in preparing to perform.¹⁹⁴ These are termed "reliance" damages.¹⁹⁵ Put another way, the goal of reliance damages is to put the non-breaching party in the same position he or she would have occupied had the contract never been made.¹⁹⁶ Because the assessment of reliance damages requires that one take into account and subtract the amount invested in reliance that would have been lost during performance, reliance damages should theoretically never exceed the value of the contract.¹⁹⁷

In most cases involving unprotected uses of intellectual property, the general damages scheme suggests that the licensor would have a fairly limited recovery under either expectation or reliance damages

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187. RESTATEMENT, supra note 165, § 347.
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^{188.} See id. § 351.

^{189.} See WILLISTON, supra note 184, § 64:13.

^{190.} See RESTATEMENT, supra note 165, § 351.

^{191.} See id. § 352.

^{192.} See id.; see also WILLISTON, supra note 184, § 64.8

^{193.} See WILLISTON, supra note 184, § 66:105 ("A breach of a contract not to engage in a certain business necessitates a valuation of the profits or the increased profits the plaintiff would have made had the defendant kept the contract.").

^{194.} See RESTATEMENT, supra note 165, § 349.

^{195.} See id.

^{196.} See id .§ 344.

^{197.} See id. § 349 cmt. a.

theories. Because the analysis starts from the proposition that the information in question was not legally under the exclusive control of the licensor (most importantly, that it was not a trade secret), one must assume that the contract was the result of a negotiation that convinced the licensee to give up the ability to use one or more of the available property right limitations in exchange for something. Due to the inability to exercise complete control, that "something" will usually be relatively small, such as a lower licensing fee or easier access to the information than the licensee would otherwise have. The contract damages should reflect the value of both the licensing fee and the fact that the licensee gives up his or her limitation right. The licensor's recovery should be limited to collecting what monetary losses it suffered from giving a single licensee an incentive to waive its limitation rights, but getting nothing in return. In instances where a licensor uses price discrimination to differentiate between users who do not give up limitation rights and those who do, this calculation would be fairly straightforward. However, in other cases, one may have to approximate the benefit given the licensee based on numerous factors such as the cost of the licensor's reliance on the fact that licensees would not make use of use their intellectual property limitation rights.

As an alternative to risking a court assessment of damages, it is possible for the parties to include a liquidated damages clause in the license. A liquidated damages clause can specify a specific dollar amount that will serve as damages in the case of a breach. However, liquidated damages must be an attempt to approximate the actual damages rather than a penalty which is so large that it serves only to dissuade breaches (or to severely punish those who do). Because such a clause poses a risk of undervaluing the true cost of non-performance, licensors of information may be unwilling to adopt it.

While it is possible that contract remedies of an equitable nature may also be applied, one would think that their application would be less likely in connection with licenses concerning unprotected uses of information property. While injunctive relief or specific performance may be appropriate when dissemination of the information would cause harm (as in the case of trade secrets), these remedies would not be appropriate when the information is otherwise unprotected.²⁰¹ Similarly, while the remedy of restitution²⁰² could be appropriate in some cases — particularly when coupled with a breach that includes

^{198.} See id. § 356.

^{199.} See id.

^{200.} But see infra Part IV.D.

^{201.} See RESTATEMENT, supra note 165, § 360 (explaining factors for determining whether legal damages are adequate); see also Lucini v. Grappolini, 288 F.3d 1035, 1038–39 (7th Cir. 2002) (listing factors for a preliminary injunction to prevent disclosure of a trade secret).

^{202.} RESTATEMENT, supra note 165, § 371.

non-payment for goods received — in most cases one would assume that the remedy would be less desirable than straight monetary damages. And for all equitable remedies, proving that there is "no adequate remedy at law" would be difficult in instances in which an otherwise unprotected use is concerned.

In sum, a party who agrees to a contract that restrains otherwise unprotected uses of information will likely be faced with expectation damages. These damages could potentially be measured by lost profits, but for non-economic fair uses in particular, this would be rare.

C. Efficient Breach as a Solution to Contractual Restraint

If expectation damages are the most likely consequence of a breach, one would expect some contracting parties to consider this option. Since the information is otherwise unprotected, one would assume the damages for breach to be far less than if an exclusive right were involved.²⁰⁴ If the use of the information is important enough, the decision to breach should be obvious and efficient. The tension is resolved by the economics of the relationship, and no significant harm can be caused by overly restrictive contracts. Problem solved.

This is a nice theoretical conclusion, but in the real world, efficient breach may not give the relief one anticipates. Whether efficient breach provides a solution depends entirely on the particular facts of the contractual relationship. The "market failures" and behavioral influences triggered by the "information obstacles" inherent in many such contracting situations — particularly in cases involving "shrinkwrap," "click-wrap," "browse-wrap," or label licenses — can prevent otherwise economically efficient results from occurring. It is important to acknowledge this, because to suggest otherwise not only ignores the economic underpinnings of efficient breach, but also creates a false sense of justice when an unfair consequence may be at hand.

1. Market Failures Prevent Information Symmetry and Renegotiation

In the case of licenses for unprotected uses of intellectual property, the most important market failure that may prevent the formation of perfect contracts is high transaction costs.²⁰⁵ Transaction costs are the costs of obtaining relevant information, negotiating contract terms, drafting the contract, and so forth.²⁰⁶ They can arise from, *inter alia*,

^{203.} See id. § 360.

^{204.} See, e.g., Bowers v. Baystate Techs. Inc., 320 F.3d 1317, 1325–26 (Fed. Cir. 2003), cert. denied, 123 S. Ct. 2588 (2003).

^{205.} See COOTER & ULEN, supra note 13, at 205-10.

^{206.} Of course, transaction costs, as described in Professor Coase's seminal work, are a basic concept in Law and Economics theory that is broader than the issues that arise in

the nature of the relationship of the parties and the general legal environment. Of the utmost concern in this regard are the aforementioned contracts of adhesion that may occur with "shrink-wrap," "click-wrap," "browse-wrap," or label licenses. Due to the high if not insurmountable transaction costs that exist in obtaining relevant information, many of these licenses will prevent at least one party from being able to determine the true costs and benefits of performance and breach

In the context of the above adhesion contracts, the disadvantaged party will usually be the licensee. The licensee will have an extremely difficult time obtaining information on the value of the intellectual property limitation right unless it is explicit in the negotiations. This is known as information asymmetry. Normally, terms in such contracts are presented as a take-it-or-leave-it proposition, with no discussion of other options. And since licensees in these cases are often less sophisticated, a real analysis requiring outside legal advice may be cost prohibitive. On the other hand, as demonstrated *infra*, the licensor has no incentive to provide this information, as it is advantaged if the licensee believes the damages from breach could be unbearably high.

Moreover, the nature of an adhesion licensing relationship may entail extremely high transaction costs for *renegotiation* of the terms if the costs and benefits actually become clearer at some future point. Of Given the typical case — a large, multi-licensing corporation on one end, and an individual end-user on the other — neither the incentives nor the conditions exist to draw the more powerful licensor to the bargaining table. Such high transaction costs make the initial imposition of liability more important than it would necessarily have to be.

2. Behavioral Influences May Prevent Rational Decision-Making

A growing movement within (and in some ways counter to) the field of Law and Economics has called on scholars to consider behav-

contracts. See Ronald H. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1, 15-19 (1960).

^{207.} See MICHAEL J. TREBILCOCK, THE LIMITS OF FREEDOM OF CONTRACT 119–20 (1993) (discussing information asymmetry in the context of standard form contracts).

^{208.} Asymmetric information is not necessarily a product of irrationality. One can argue that a rational actor will forego efforts to obtain information if the cost of those efforts exceeds the benefits of the information. *See* COOTER & ULEN, *supra* note 13, at 209.

^{209.} Note that the lack of substantive negotiation in the first instance can provide overall efficiencies due to the lower transaction costs. For example, the licensor does not have to deal with each individual customer. See Kahan & Klausner, supra note 105, at 719–25. However, these efficiencies do not necessarily offset inefficiencies associated with performance when the costs to the promisee outweigh the benefits to the promisor. See supra note 158.

ioral influences that may prevent individuals from making rational economic decisions.²¹⁰ This movement is an attempt to explain and incorporate into the analysis the psychology behind the decisions people make that cannot be explained by wealth maximization.²¹¹ These considerations are important for this discussion because they likely have a greater effect on decision making when the economics of the relationship are unclear to one of the parties, as in the case of contracts to recapture patent or copyright limitations.

One of the most important problems human behavior imposes is the inability of individuals to make overly complex decisions.²¹² To account for this limitation, individuals may narrow their decisions to the choices that are simple, essentially ignoring those that would involve time-consuming analysis. The party is unwilling or unable to act as a rational decision-maker by considering and quantifying all of the options. In the adhesion contracts discussed, many licensees act so irrationally that they may even ignore the fact that they are taking the good in question subject to a license. Ripping and immediately shredding "shrink-wrap" agreements and clicking through "click-wrap" agreements without a second thought is the norm. 213 Additionally, due to the fact that individuals are often overconfident of appreciating what is important but not very good at determining the probability that events will occur, they may see no need to resolve complexities that seem unlikely and remote. 214 Thus, the very nature of the agreement makes it less likely that a licensee will be able to undertake a rational decision making role regarding the license.

To avoid the problems behavioral influences impose, information to clarify the complexities and aid in decision-making may be obtained, but at a cost. These costs, as with those associated with market transactions, can be borne by the party holding the information (the drafter, in the case of an adhesion contract) or by the party who needs the information to decide whether to perform or breach.

^{210.} See Russell B. Korobkin & Thomas S. Ulen, Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics, 88 CAL. L. REV. 1051, 1057–58 (2000). Several excellent academic pieces on the subject have appeared in recent years. See, e.g., Robert A. Prentice, The Case of the Irrational Auditor: A Behavioral Insight into Securities Fraud Litigation, 95 NW. U. L. REV. 133 (2000); Cass R. Sunstein, Behavioral Law and Economics: A Progress Report, 1 AM. L. & ECON. REV. 115 (1999); Christine Jolls et al., A Behavioral Approach to Law and Economics, 50 STAN. L. REV. 1471 (1998);

^{211.} See Korobkin & Ulen, supra note 210, at 1057–58.

^{212.} See id. at 1077-82.

^{213.} See Hillman & Rachlinski, supra note 94, at 479-80.

^{214.} See Korobkin & Ulen, supra note 210, at 1087–95.

3. Modeling the Effect of Market Failure and Behavioral Influences on Choices and Efficiency

It can be difficult to determine the precise effects of "market failures" and behavioral influences on overall economic efficiency because the analysis requires: 1) quantifying these costs and 2) recognizing that either party to the contract can choose to internalize these costs. Further complicating the matter, each party's acts may differ depending on the acts of the other. In such a case, analytical techniques from other disciplines can provide useful assistance.

Methods of visualizing the complexity and modeling the likely behavior of two independent parties have been well-characterized in a subset of the field of experimental economics²¹⁵ known as "game theory." Game theory techniques usually involve determining the benefits or "payoffs" participants in an economic game will receive for particular outcomes and presenting them in a format that allows each participant to choose strategies in view of the other's possible decisions. Participants must predict and react to each other's moves in order to obtain the best outcome for themselves. Game theory techniques have been employed to elucidate behavior underlying issues in many legal fields including bankruptcy, family law, and of course, contracts.

A common game theory construct, called a normal form game, presents the scenario in a bimatrix. While somewhat simplistic, a bimatrix normal form game allows one to easily determine the best move for each participant in view of the other's possible moves. This combination of moves yields a certain outcome, termed the "Nash Equilibrium" after the renowned mathematician John Nash. The Nash Equilibrium is a good predictor of the likely outcome of decisions by two independent parties to a contract.

^{215.} Experimental economics is concerned with the evaluation of human behavior in an economic setting. See Mike Shore, Experimental Economics, at http://www.gametheory.net/Dictionary/Experimental_Economics.html (last visited Nov. 25, 2003). Rather than relying solely on complex mathematical theories to predict behavior as traditional economists have, experimental economists observe actual human interaction. See Alvin E. Roth, Introduction to Experimental Economics, in The Handbook of Experimental Economics 21–23 (John H. Kagel & Alvin E. Roth, eds. 1995).

^{216.} See Douglas G. Baird et al., Game Theory and the Law 10–11 (1994).

^{217.} See, e.g., Thomas H. Jackson, Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain, 91 YALE L.J. 857 (1982).

^{218.} See, e.g., Robert H. Mnookin & Lewis Kornhauser, Bargaining in the Shadow of the Law: The Case of Divorce, 88 YALE L.J. 950, 951 (1979).

^{219.} See, e.g., Avery Katz, The Strategic Structure of Offer and Acceptance: Game Theory and the Law of Contract Formation, 89 MICH. L. REV. 215, 249–65 (1990).

^{220.} See BAIRD, supra note 216, at 10–11.

^{221.} A Nash equilibrium occurs when "[t]he combination of strategies that players are likely to choose is one in which no player could do better by choosing a different strategy given the strategy the other chooses." *See id.* at 21.

The contracts discussed above can be depicted using a bimatrix of the various choices each party faces under different conditions, with the assignment of quantities for the inputs, costs, and payoffs. For example, an *inefficient* adhesion contract could appear as in Figure 1 ²²²

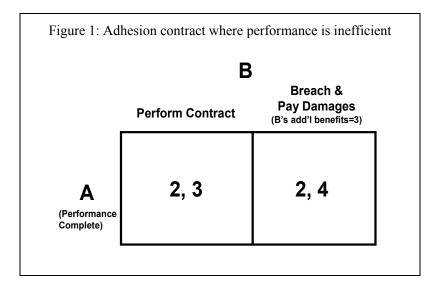


Figure 1 depicts a contract between A, the contract drafter, and B, the party promising to adhere to a waiver of the right to use otherwise unprotected information. Assume the following arbitrary benefits and burdens:

- If A and B perform the contract, A will benefit by 2 units and B will benefit by 3; and
- If A performs but B breaches, B will receive 6 units, minus expectation damages (lost profits) paid to A.²²³ A's lost profits are A's benefits minus any costs it would have incurred in performance.

^{222.} Figure 1 is a modification of a common normal form game which allows one to quantify the net efficiency of decisions made by two interested parties. The use of games such as this in analyzing the best moves for two independent parties to a contract has been particularly important in Law and Economics literature. Some of the most important work has been done by Cooter and Ulen. See Robert D. Cooter, Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant, 144 U. Pa. L. REV. 1643, 1657–58 (1996); COOTER & ULEN, supra note 13, at 191–93. The Figures in this Article recall that work extensively. However, unlike most bimatrices in Law and Economics literature, Figure 2 incorporates behavioral influences and market failures, referring to them as additional "costs."

^{223.} Thus, as established by the expectation measure of damages, A is compensated to the point of indifference as to whether or not B performs. *See supra* Part IV.A. In this case, A's compensation will be equal to the 2 units A would have received if B had performed.

Given the above quantities and the fact that A has already completed performance, B's best move is to breach. Moreover, the breach is efficient because the total benefits after breach (six) are greater than the total benefits for performance (five).

Now, take the same situation, and add in the impact of information obstacles (i.e., transaction costs and the cost of behavioral influences), assuming that either A or B can absorb the costs as follows:

 Information to overcome the "information obstacles" either costs 1.5 units for A to deliver or 1.5 units for B to obtain independently.²²⁴

The bimatrix necessarily becomes more complicated as A and B now have additional decisions to make, as shown in Figure 2. 225

Figure 2: Adhesion contract where performance is inefficient and information obstacles exist Obtain Info, Breach **Perform Contract** & Pay Damages & Obtain Info **Perform Contract** (B's add'l benefits=3) Information Obstacles 2, 3 2, 1.5 2. 2.5 Present (info costs for B = 1.5) No Information 0.5, 5.5 0.5, 3 0.5, 3 Obstacles (info costs

Again, A's performance is assumed, but it has the choice in preparing the contract to either provide no information to B to eliminate the market failure and behavioral influence obstacles or provide the information to B at cost of 1.5 units.²²⁶ If A chooses not to provide the

^{224.} In other words, the burden is on either A or B to incur the costs of eliminating the information obstacles. A more realistic scenario assumes that information is less expensive for A to provide, which is likely quite typical for the party offering the adhesion contract.

²²⁵ This figure assumes that B does not have the option to breach without obtaining the information. This is reasonable as B must have some basis for determining that breaching and paying damages is a better option than performing. Alternatively, B could decide to perform without obtaining any additional information beyond that which it had when the contract was formed.

^{226.} Adhesion contracts provide savings for the drafter because individual negotiations are avoided. See Kahan & Klausner, supra note 105, at 719–25. Thus, if the drafter were to

information, B can decide to (1) ignore the problem and perform, (2) pay to obtain information and still decide to perform, or (3) pay to obtain information and decide to breach.²²⁷ Figure 2 assumes that A must decide from the outset whether to provide information regardless of whether B uses it. However, B can always choose whether to pay to obtain information.²²⁸

Keep in mind that, if not for the information costs, both rows in Figure 2 would present an efficient breach scenario because the basic performance costs to B far outweigh the benefits to A. However, note that any time B incurs the information costs and these costs are greater than B's cost of performance minus A's benefit from performance (as in Figure 2), B will be better off by performing. As such, performance will be more efficient than breach. In other words, given information costs, i, B's performance costs, x, and A's performance benefit, y, efficient performance will occur when:

$$i > x - y$$

Even more interesting, given the above outcome values, note that A will never have the incentive to disclose the necessary information at its own expense. A's best "move" is to expend as little as possible on disseminating information that would be helpful to B in assessing whether to breach. This is because the dissemination is treated as an expense, lowering A's expected profits. In view of A's choice, B's best move is to perform, because every other option produces less total income. Thus, the Nash Equilibrium point is for performance (see Figure 2, top left section). Given the above scenario, this will be the case whenever A's performance benefit minus B's performance costs is greater than zero, or:

$$y - x > 0$$

The above hypothetical suggests that there may be situations in which breach would be more efficient overall than performance, but will not occur because (1) the party seeking the contractual waiver will not have the incentives to disseminate information sufficient to allow the other party to decide to breach and (2) the party agreeing to the waiver will also not have the incentives to make the investment to

undertake to determine the specific benefit from each contract, it is reasonable to assume some cost would be incurred that would detract from the overall benefit of the contract.

^{227.} Again, this figure assumes that B, as a rational actor, would not decide to breach the contract without the presence of additional information.

^{228.} This is probably similar to actual contracting situations between a large company using adhesion contracts according to a pre-determined marketing strategy and individual consumers.

obtain the information. Performance will be favored at suboptimal times.

D. Consequences and Solutions

The obvious consequence of the above analysis is that parties may feel locked into inefficient contracts because of the presence of additional costs resulting from the information obstacles. In terms of legal rights, the inefficiencies end up granting more power to licenses protecting the otherwise unprotectable uses of intellectual property rights, potentially raising them to the level of protected intellectual property interests (such as patents and copyrights). Such interference with the delicate balance that exists in our intellectual property regimes may have dramatic effects on the overall progress of science and the useful arts. In effect, it is the mechanism that enables state law to encroach on preemptive federal property protection schemes.

This precise concern was reflected in Judge Dyk's dissent in the recent federal appeals court decision, *Bowers v. Baystate Technologies, Inc.*, that focused on the difference between freely negotiated licenses involving unprotected uses of intellectual property and adhesion contracts:

I nonetheless agree with the majority opinion that a state can permit parties to contract away a fair use defense or to agree not to engage in uses of copyrighted material that are permitted by the copyright law, if the contract is freely negotiated. A freely negotiated agreement represents the "extra element" that prevents preemption of a state law claim that would otherwise be identical to the infringement claim barred by the fair use defense of reverse engineering.

However, state law giving effect to shrinkwrap licenses is no different in substance from a hypothetical black dot law. Like any other contract of adhesion, the only choice offered to the purchaser is to avoid making the purchase in the first place. State law thus gives the copyright holder the ability to eliminate the fair use defense in each and every instance at its option. In doing so, as the majority concedes, it authorizes "shrinkwrap agreements...

[that] are far broader than the protection afforded by copyright law "229

Judge Dyk would therefore uphold some contracts that waive intellectual property limitation rights, but strike down those that do not evidence true negotiation under the doctrine of preemption. Judge Dyk is not the first to suggest this type of selective enforcement.²³⁰

It appears that Judge Dyk's dissent was directed to considerations of fairness and construction of the "extra elements" doctrine to alleviate a potential problem. The majority in *Bowers* dismissed the concern by suggesting that real world economics minimize the effect. This Article's analysis negates the majority's per se determination and demonstrates how Judge Dyk's dissent is supportable on economic grounds. Thus, a legal rule disallowing non-negotiated contracts concerning unprotected uses of intellectual property can be justified by normative *and* economic analysis. Under this scheme, true adhesion contracts should be unenforceable and negotiated contracts should be permitted.

Of course, no solution is entirely without costs. While the above legal rule might be better than a rule enforcing all such contracts regardless of the environment of formation, it nevertheless removes a useful cost-savings measure from the licensor's toolbox. If every license has to be the result of intense negotiation, costs of products will certainly rise without any net gain in economic efficiency. Is there a way to allow cost effective licensing while reducing the number of inefficient contracts that are nonetheless performed due to high information costs?

Perhaps the best way to balance these opposing interests is through price discrimination as suggested in the *ProCD* case. ²³³ In

Thus, case law indicates the First Circuit would find that private parties are free to contractually forego the limited ability to reverse engineer a software product under the exemptions of the Copyright Act. Of course, a party bound by such a contract may elect to efficiently breach the agreement in order to ascertain ideas in a computer program unprotected by copyright law. Under such circumstances, the breaching party must weigh the benefits of breach against the arguably de minimus damages arising from merely discerning non-protected code.

^{229.} Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1336–37 (Fed. Cir. 2003) (internal citations omitted) (Dyk, J., dissenting), cert. denied, 123 S. Ct. 2588 (2003).

^{230.} See David Nimmer et al., supra note 144, at 68.

^{231.} See Bowers, 320 F.3d at 1325-26, stating:

Id.

^{232.} See Kahan & Klausner, supra note 105.

^{233.} See ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449–50 (7th Cir. 1996). Although the term "price discrimination" raises eyebrows for those familiar with antitrust law, it would not present a problem here. For example, the Robinson-Patman Act, 15 U.S.C. § 13(a)–(f) (2000), prohibits the sale of the same good on different price terms to different buyers when it threatens to injure competition. However, discrimination based on actual

that case, recall that the plaintiff practiced price discrimination between corporate and individual licensees of its database, granting individuals a price break for more limited access.²³⁴ If this were widely adopted for licenses involving unprotected intellectual property uses, the negotiation problem would seem to be solved. For example, if a licensor such as Microsoft wanted to control reverse engineering of its Windows XP software, it could offer a version allowing reverse engineering at a high price and one without this option at a lower, consumer-oriented price. That would allow the potential licensee to determine the value of the right prior to agreeing to a license and remove most of the market failures and behavioral-influencing complexities associated with the typical "shrink-wrap" or "click-wrap" license. Moreover, widely-employed price discrimination allows the licensor to internalize much of the cost of the information obstacles.²³⁵ These costs are also reduced because the licensor can rely on efficiencies of scale obtained from incorporating the practice into mass con-

Another possibility might include the creation of clearance centers for the buy-back of certain licensing waivers. An analogous practice already exists for certain types of protected intellectual property. For example, if a newspaper subscriber wished to incorporate a graphic from an article into a presentation or book, he or she may be able to obtain permission through a service known as the Copyright Clearance Center. The transaction costs involved in using such a service are much reduced over individual-initiated, one-time negotiations. There is no reason that a similar service would not work as efficiently for contractually-protected uses of otherwise available

cost differences, such as the inclusion of different rights in different sales, is not prohibited. *See* Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220 (1993). In *Brooke Group*, the Court stated:

By its terms, the Robinson-Patman Act condemns price discrimination only to the extent that it threatens to injure competition. The availability of statutory defenses permitting price discrimination when it is based on differences in costs, § 13(a), "changing conditions affecting the market for or the marketability of the goods concerned," ibid., or conduct undertaken "in good faith to meet an equally low price of a competitor," § 13(b); Standard Oil Co. v. FTC, 340 U.S. 231 (1951), confirms that Congress did not intend to outlaw price differences that result from or further the forces of competition.

Id. Additionally, the Robinson-Patman Act only applies to tangible goods. *See* Metro Communications Co. v. Ameritech Mobile Communications, Inc., 984 F.2d 739, 745 (6th Cir. 1993).

^{234.} See ProCD, 86 F.3d at 1449-50.

^{235.} Of course, it is impractical to assume that the licensor can internalize all information obstacle costs because the consumer will still have to choose between a limited number of options. The more and varied the options offered to the consumer the more internalized the information costs become. However, as more options are present, the transaction costs necessarily increase.

^{236.} See The Copyright Clearance Center, at http://www.copyright.com/ (last visited Nov. 25, 2003).

information. An additional advantage of such a service is that it does not require the licensee to know that he or she will need the additional rights at the time of the original contract.

Other alternatives surely exist. The salient point is that individuals, industry, and the U.S. intellectual property system can all come out ahead if contract rules in this instance take into account both traditional legal doctrine and *all* relevant economic considerations. If this is done, a solution may be fashioned that provides real relief and is more than a legal mirage.

V. CONCLUSION

Statutory and common law limitations on intellectual property rights are important aspects of the overall scheme that balances creation and innovation incentives and the rights of the general public. Contractual waivers of these rights pose a potential problem to the extent that they allow an inappropriate extension of intellectual property rights. By considering the problem from the perspective of contract damages instead of enforceability, the true impact can be assessed. The use of Law and Economics concepts in this regard allows a unique measure of the propriety of such contracts to be derived, which can inform judicial analysis. Through the use of this measure, it is clear that "efficient breach" cannot always provide a fair solution to contractual restraints of important intellectual property rights limitations.