

**BEYOND ABSTRACTION:  
THE LAW AND ECONOMICS OF COPYRIGHT SCOPE AND  
DOCTRINAL EFFICIENCY**

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**ABSTRACT**

*Uncertainty as to the optimum extent of protection has generally limited the capacity of law and economics to translate economic theory into coherent doctrinal recommendations in the realm of copyright. This article explores the relationship between copyright scope, doctrinal efficiency and welfare from a theoretical perspective to develop a framework for evaluating specific doctrinal recommendations in copyright law. The usefulness of applying this framework in either rejecting or improving doctrinal recommendations is illustrated with reference to the predominant law and economics theories of fair use.*

Keywords: copyright, copyright scope, cost-benefit analysis, doctrinal efficiency, fair use, law and economics, secondary liability, market failure, and private ordering.

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**CONTENTS**

INTRODUCTION .....	3
PART I – THE PECULIAR QUALITIES OF INFORMATION: A Brief Introduction To The Law And Economics Of Copyright.....	8
PART II – COPYRIGHT SCOPE AND DOCTRINAL EFFICIENCY .....	13
A. Copyright Scope .....	14
B. The Welfare Effects of Changes in Copyright Scope .....	21
Stage 1: The simple model .....	22
Stage 2: The effects of private ordering.....	26
Stage 3: Recognizing indeterminacy .....	34
C. Doctrinal Efficiency.....	37
D. Applying the Copyright Scope and Doctrinal Efficiency Framework.....	44
PART III – APPLICATION TO FAIR USE .....	48
A. Law and Economics Theories of Fair Use.....	50
1. Fair Use as Market Failure .....	50
2. A Cost-Benefit Approach to Fair Use.....	53
B. Applying the Doctrinal Metrics to the Market Failure Theory.....	55
1. The Efficiency of Private Ordering .....	55
2. Doctrinal efficiency .....	61
3. Variation in the Scope-Welfare Relationship .....	62
4. Overall Assessment of the Market Failure Theory.....	62
C. Applying the Metrics to Cost-benefit Approach .....	63
1. The Efficiency of Private Ordering .....	63
2. Doctrinal Efficiency .....	64
3. Variation in the Scope-Welfare Relationship .....	72
4. Overall assessment of the Cost-Benefit Approach to Fair Use.....	76
D. Revisiting the Law and Economics Theories of Fair Use .....	77
CONCLUSION.....	79

## INTRODUCTION

The reach of copyright law has become the subject of an increasingly heated and polarized debate. On one side of that debate, Lawrence Lessig argues that copyright – a law which originally only regulated publishers – has expanded so dramatically that it now regulates every conceivable use of work in digital form. Lessig warns that this unprecedented level of control allows large corporate interests to “lock-down culture and control creativity.”<sup>1</sup> On the other side of the debate, Paul Goldstein argues that we should “extend [copyright] into every corner where consumers derive value from literary and artistic works.”<sup>2</sup> The debate between these two extremes plays out in a number of different theaters, and with respect to a variety of issues. In particular, recent computer and internet related technological developments including peer-to-peer filesharing, digital music players, blogging, web-casting, and pod-casting, raise novel questions as to who should be entitled to dictate the relationship between existing copyrights and new technology.

To find answers to these questions, a number of academics have turned to law and economics.<sup>3</sup> One of the advantages of economic analysis is that it allows us to abstract from specific situations to general principles. However, the abstract nature of law and economics models of copyright has also fundamentally limited their application to

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<sup>1</sup> LAWRENCE LESSIG, *FREE CULTURE, HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* (2004).

<sup>2</sup> PAUL GOLDSTEIN, *COPYRIGHT'S HIGHWAY: THE LAW AND LORE OF COPYRIGHT FROM GUTENBERG TO THE CELESTIAL JUKEBOX*, 236 (1994).

<sup>3</sup> Law and economics refers broadly to the application of methods of economic analysis to legal problems. See, Heico Kerkmeester, *General Methodology in THE ENCYCLOPEDIA OF LAW & ECONOMICS* (1999), available at <http://encyclo.findlaw.com/0400book.pdf>. (Reviewing the literature on the methodology of law and economics.)

specific doctrinal debates within copyright. If law and economics is to be anything more than a way to explain copyright so that economists can understand it, it must lend itself to doctrinal recommendations that go beyond the truism that judges should do what is efficient. This article explores the limits and the potential of law and economics to make a significant contribution of our understanding of copyright doctrine.<sup>4</sup>

This article builds on previous scholarship questioning the scope of copyright,<sup>5</sup> and extends that analysis into a more systematic inquiry within a law and economics framework. Existing scholarship questioning the scope of copyright tends to focus on either the public goods nature of information or the positive externalities of information production,<sup>6</sup> whereas this article focuses primarily on the relationship between copyright scope and doctrinal efficiency.<sup>7</sup>

Claims that copyright is either unnecessary or too broad in specific applications are a staple part of modern copyright scholarship. These descriptions of excessive copyright are usually coupled with a variety of tailored suggestions as to how the law

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<sup>4</sup> This Article builds on a significant body of literature relating to the law and economics of copyright in general. *See*, Wendy J. Gordon and Robert G. Bone, Copyright in THE ENCYCLOPEDIA OF LAW & ECONOMICS (1999), available at <http://encyclo.findlaw.com/1610book.pdf> (Reviewing economically-oriented contributions to copyright scholarship.)

<sup>5</sup> *See, e.g.*, Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005); Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917 (2005); LAWRENCE LESSIG, *FREE CULTURE* (2004); James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMP. PROBS. 33 (2003); LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* (2001); Yochai Benkler, *From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access*, 52 FED. COMM. L.J. 561 (2000); LAWRENCE LESSIG, *CODE AND OTHER LAWS OF CYBERSPACE* (1999); Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354 (1999); Julie E. Cohen, *Lochner in Cyberspace: The New Economic Orthodoxy of "Rights Management"*, 97 MICH. L. REV. 462 (1998); Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 1000-05 (1997) Lawrence Lessig, *Intellectual Property and Code*, 11 ST. JOHN'S J. LEGAL COMMENT. 635 (1996); Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 491-92 (1996); Neil W. Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283 (1996).

<sup>6</sup> *See e.g.*, Brett M. Frischmann, *supra* note 5. (Developing a comprehensive theory of the role of uncaptured positive externalities in the context of infrastructure.)

<sup>7</sup> These terms are defined more exactly in Part II.B and Part II.D respectively.

could be altered to remediate them.<sup>8</sup> Compulsory licenses and the application of the fair use doctrine are particularly popular candidates in this regard.<sup>9</sup>

The other side of the copyright debate is reflected in claims that the current effective scope of copyright is not enough to provide the right incentives for the creation of new works. This view was especially evident in submissions made to the Supreme Court in its most recent case dealing with the adaptation of copyright law to new technology – *MGM Studios v. Grokster*.<sup>10</sup> For example, Nobel Prize winning economist Kenneth Arrow and his fellow *amici* argued that the liability rule adopted by the Ninth Circuit in *Grokster* was inefficient because it failed to give technology developers any incentive to deter infringement.<sup>11</sup> In a similar vein, Peter Menell *et al* called for the Court to decide questions of indirect liability for copyright infringement by balancing “the harm

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<sup>8</sup> See, e.g., Stacey L. Dogan & Joseph P. Liu, *Copyright Law and Subject Matter Specificity: The Case Of Computer Software*, 61 N.Y.U. ANN. SURV. AM. L. 203 (2005) (noting that a number of courts have significantly adapted copyright doctrines to deal with special features of the computer software market, and concluding that these adaptations have, by and large, positively sought to strike a balance between incentive and access). Jeffrey A. Andrews, *Reversing Copyright Misuse: Enforcing Contractual Prohibitions on Software Reverse Engineering*, 41 HOUS. L. REV. 975, 977-978 (2004) (Noting that in response to concerns about the overprotection of functional elements of software, courts have begun to use the doctrine of misuse as a tool to hold certain copyrights unenforceable.) Brett Frischmann & Dan Moylan, *The Evolving Common Law Doctrine of Copyright Misuse: A Unified Theory and Its Application to Software*, 15 BERKELEY TECH. L.J. 865, 898-900 (2000). Lisa P. Ramsey, *Intellectual Property Rights in Advertising* (working paper 2005). Raymond Shih Ray Ku, *Consumers and Creative Destruction: Fair Use Beyond Market Failure*, 18 BERKELEY TECH. L.J. 539 (2003) (finding that because “consumer copying does little to reduce the incentives for creation because, for the most part, the creation of music is not funded by the sale of copies of that music.”). Jeffrey H. Brown, *They Don't Make Music the Way They Used To”: The Legal Implications of Sampling in Contemporary Music*, 1992 WIS. L. REV. 1941, 1987 (1992). (Proposing a compulsory license for sampling). Chris Johnstone, *Underground Appeal: A Sample of the Chronic Questions in Copyright Law Pertaining to the Transformative Use of Digital Music in a Civil Society*, 51 J. COPYRIGHT SOC'Y U.S.A. 569, 594 (2004) (Proposing a compulsory license for sampling, but limited to transformative uses.) Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright And Cultural Context*, 84 N.C.L. REV. 547, 638 (2006) (Suggesting a liability rule framework to “facilitate access to copyrighted works for those whose aesthetic style incorporates use of existing works while retaining the economic rights of copyright owners to receive compensation for uses of their creations.”)

<sup>9</sup> *Id.*

<sup>10</sup> *MGM Studios Inc. v. Grokster, Ltd.*, 125 S. Ct. 2764 (2005).

<sup>11</sup> *MGM Studios Inc. v. Grokster, Ltd.*, Brief of Amici Curiae Kenneth J. Arrow et al in Support Of Petitioners, 2004 U.S. Briefs 480, 3 (U.S. S. Ct. Briefs 2005).

to copyright owners against adverse effects on consumers from the loss of non-infringing uses from dual-use technologies.”<sup>12</sup>

Calls for tailoring copyright in response to specific circumstances are likely to remain part of the academic and political landscape for some time. Commenting on this trend, Joseph Liu argues that the essential character of U.S. copyright law is changing from “a judicially administered, industry-neutral property rights regime” to a “far more complex and industry-specific allocation of rights and responsibilities.”<sup>13</sup> This phenomenon is by no means limited to Congress and the Copyright Office. Federal Judges have also shown a willingness to apply copyright doctrine as a set of policy levers in a wide range of cases, a practice especially evident in the law relating to fair use.<sup>14</sup>

Copyright demands tailoring, both judicially and legislatively, because of its broad rights and even broader potential application.<sup>15</sup> But even if we accept that copyright doctrines should be used as levers to more perfectly tailor the law, we still need a mechanism to select which lever to pull and to understand when the costs of such tailoring are likely to exceed the benefits. The limits and untapped possibilities of an economic analysis of copyright in making these determinations are the subject of this Article.

This article develops an economic model of copyright scope and doctrinal efficiency as a vehicle for evaluating the welfare implications of changes in the breadth of

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<sup>12</sup> MGM Studios Inc. v. Grokster, Ltd., Brief of Amici Curie Peter S. Menell et al in Support of Petitioners, 2004 U.S. Briefs 480, 3 (U.S. S. Ct. Briefs 2005)

<sup>13</sup> Joseph P. Liu, *Regulatory Copyright*, 83 N.C.L. REV. 87 (2004) (Exploring the implications of the increasingly regulatory nature of U.S. copyright law.)

<sup>14</sup> See, Matthew Sag, *God In The Machine: A New Structural Analysis Of Copyright's Fair Use Doctrine*, 11 MICH. TELECOMM. TECH. L. REV. 381 (Arguing that the fair use doctrine constitutes a deliberate delegation of policy making responsibility from the legislature to the judiciary.)

<sup>15</sup> See, Michael Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law* (Working paper) available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=820308](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=820308).

the rights vested in copyright owners.<sup>16</sup> Like other economic models of copyright, this model does not provide a basis for evaluating individual cases, but unlike traditional models, this model establishes a set of metrics by which to assess specific doctrinal recommendations. This transition from abstract economics to practical application sets this Article apart from much of the existing literature. By developing and then applying a set of metrics for assessing doctrinal proposals, this article bridges the gap between general analysis of the desirable level of copyright and specific doctrinal recommendations. This Article demonstrates the usefulness of these metrics in the context of a critical analysis of the predominant law and economics theories of the fair use doctrine.

The structure of this Article is as follows. By way of introduction, Part I reviews the fundamental law and economics accounts of copyright. Part II explores the relationship between copyright scope, doctrinal efficiency and welfare from a theoretical perspective to develop a law and economics framework for evaluating specific doctrinal proposals. Part III then applies that framework to a critique of the current law and economics of fair use.

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<sup>16</sup> The standard economic definition of social welfare is the sum of all individual utilities, but determining which factors contribute to welfare in the context of copyright is difficult. For example, one can not simply assume that all books are of equal value, all movies are of equal value, or even that the average value of books and movies are the same. Furthermore, in the digital age there is no real scarcity of information, merely a scarcity of useful information.

## PART I – THE PECULIAR QUALITIES OF INFORMATION: A Brief

### Introduction To The Law And Economics Of Copyright

This Part introduces the essentials of the law and economics of copyright.

Traditional law and economics provides a rationale for both the existence of exclusive rights over information, in the form of copyright, and for the limited nature of those rights.<sup>17</sup> The basic dilemma of intellectual property is encapsulated by Stewart Brand’s observation that “Information wants to be free. Information also wants to be expensive.”<sup>18</sup> Information wants to be free in the sense that, once produced, information is cheap to copy, distribute and recombine. Information wants to be expensive in the sense that, for information producers to recover their fixed costs of creation, they need to be able to charge more than just the low marginal cost of copying which results from a competitive market.

In its pure form, information is a public good, meaning that it is both non-excludable and nonrivalrous.<sup>19</sup> The non-excludable nature of information means that those who produce it often find it difficult to keep the benefits to themselves.<sup>20</sup> Consider the following example. Amy, a budding novelist, plans to write a novel at an expected initial cost \$100 (called the “cost of expression”). Amy also expects that, once written, it will only cost her \$1 to make copies of her novel for distribution. There are 10 potential buyers of Amy’s work, each with a different valuation ranging from Bill, for whom the novel is worth \$20 to Kevin for whom the novel is worth only \$11. If Amy was able to

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<sup>17</sup> This review is unnecessary for readers who are already familiar with the law and economics of copyright.

<sup>18</sup> STEWART BRAND, *THE MEDIA LAB: INVENTING THE FUTURE AT MIT* (1987). Information does not “want” anything in the cognitive sense, but it does have certain tendencies and characteristics that can be usefully summarized by recourse to such anthropomorphic terms.

<sup>19</sup> STEVEN SHAVELL, *FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW* 157–159 (2004).

<sup>20</sup> *Id.*

sell 10 copies of her novel at \$11 each, she would be able to recover both her initial cost of expression and her marginal cost (the cost of printing each additional volume).

Unfortunately for Amy she is unlikely to be able to charge that price because once she sells a copy to her first customer, Bill, he will also be able to make copies and offer to sell them to the remaining customers. Bill's cost of expression is zero, since he did not write the novel, so Bill can make a profit by selling at any price above his marginal cost of copying. If Amy cannot stop Bill free-riding on her work, she will abandon the idea of becoming a novelist and pursue an alternative career instead, a sub-optimal outcome for both Amy and her customers.

Amy's story illustrates the classic economic rationale for the creation of exclusive rights in information in general, and copyright in particular. Without the legal artifact of exclusivity, Amy's competitors will face a lower average cost of production for her novel than she does.<sup>21</sup> Consequently, faced with the choice between creating and copying, it makes more sense to copy. To put it another way, in a competitive market, the market price will be that of the lowest cost producer, which the author will never be. As such, without some mechanism to appropriate the benefits of their investments, authors and publishers will under-invest in the production of information products. Copyright skeptics point out that authors invest in writing for many reasons beyond the financial rewards that copyright law provides. This is true but it should not obscure the point that, the author's hope of commercial success is often what keeps them chained to the typewriter and keeps their publisher paying the rent.

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<sup>21</sup> This is based on the assumption that both parties face the same marginal cost. But even if the subsequent producer has a higher marginal cost than the author, he will still have a lower average cost, as long as his marginal cost is less than the original author's marginal cost plus her average fixed costs.

The function of copyright protection in resolving the under-investment problem in relation to expressive works is well understood.<sup>22</sup> Copyright rights allow an author to internalize more of the benefits of her creations; or in the jargon of economics, copyright facilitates the internalization of a work's positive externalities and limits free riding.<sup>23</sup>

It is important to note the functionalism of the law and economics approach to copyright. The exclusive rights vested in authors do not exist by virtue of natural or inherent rights, they are simply a means to an end. This view finds support in copyright's constitutional mandate. Congress is empowered to enact laws such as copyright for the purpose of promoting "the progress of science and the useful arts."<sup>24</sup> The Constitution does not appear to contemplate granting exclusive rights to authors purely for their personal enrichment. As the Supreme Court has commented on a number of occasions, the constitutional authority for copyright is expressly for the purpose of the promotion of science and useful arts, and copyright rewards to authors are means to that end, not an end in themselves.<sup>25</sup> This is consistent with a law and economics theory of copyright.

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<sup>22</sup> See Peter S. Menell & Suzanne Scotchmer, *Intellectual Property*, in THE HANDBOOK OF LAW AND ECONOMICS (A. Mitchell Polinsky & Steven Shavell eds. forthcoming), available at <http://ssrn.com/abstract=741424>. Note also that government grants of exclusive rights in information are not the only solution to this problem. There are in fact a number of proposals to replace intellectual property with prizes and government subsidies. See for example, Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J.L. & ECON. 525 (2001); Michael Abramowicz, *Perfecting Patent Prizes*, 56 VAND. L. REV. 115 (2003).

<sup>23</sup> Harold Demsetz, *Toward a Theory of Property Rights*, 57 Am. Econ. Rev. Papers & Proc. No. 2 (1967). A positive externality arises when at least some benefits of an activity spill over to parties not directly involved in the activity. In contrast, free riders are actors who obtain the benefits of an activity, but do not share its costs. The "free rider problem" is the question of how to prevent free riding from taking place, or at least limit its effects.

<sup>24</sup> Article I, § 8, of the Constitution provides that "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."

<sup>25</sup> *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the 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.) See also, *Eldred v. Ashcroft*, 537 U.S. 186, 212 (2003) (copyright law celebrates the profit motive,

Various regimes of intellectual property address the non-excludability of information by making certain classes of information exclusive-in-law, even though they cannot make them actually exclusive-in-fact. However, the exclusive rights established by regimes such as copyright only address one half of the public good problem of information. The other half of the public good problem, the nonrivalrous nature of information, must still be accounted for. A nonrivalrous good is one for which one person's use does not affect the value of any other person's use.<sup>26</sup> For example, while a photographic print is a tangible physical object, it also embodies creative expression. If I take the print from your living room, you are deprived of the enjoyment of seeing it there; on the other hand, if I merely reproduce the print, you still have the original and yet I now have one too. The photo *qua* object is rivalrous; the photo *qua* artistic expression is non-rivalrous.<sup>27</sup>

The non-rivalrous nature of information makes the welfare implications of intellectual property different to those of other forms of property: the incentives attributed to allocating property rights in information must be off-set against the resulting under-

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recognizing that the incentive to profit from the exploitation of copyrights will redound to the public benefit by resulting in the proliferation of knowledge. The profit motive is the engine that ensures the progress of science.)

<sup>26</sup> See e.g. Richard Cornes & Todd Sandler, *THE THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS* 39 (1996) (defining nonrivalry as a situation in which a unit of a good can be consumed by one individual without detracting, in the slightest, from the consumption opportunities still available to others from that same unit.)

<sup>27</sup> Note that the artistic expression aspect of the work becomes rivalrous if its value lies in part in its uniqueness. It is for this reason that many photographers release a predetermined limited number of prints of any given photo.

utilization of that information.<sup>28</sup> In other words, there is a trade-off between the author's incentive to produce a work and the public's interest in access to that work.<sup>29</sup>

The author's exclusive rights under copyright law provide a buffer against price competition.<sup>30</sup> This competitive buffer allows the author to charge higher prices than she otherwise would, which in turn has two immediate effects. First, some consumers remain willing to purchase the work at a higher price and consequently pay more. Assuming we value the welfare of both consumers and authors equally, this is simply a wealth transfer and is welfare neutral. Second, those who are unwilling to pay the higher price are forced to go without the work in question.<sup>31</sup> Market allocation of scarce resources to their highest valued use is usually welfare enhancing, but for nonrivalrous goods, the exclusion of low value users produces a deadweight loss<sup>32</sup> because their consumption is not at the expense of another who values the good more.

Taking both the non-excludable and non-rivalrous nature of information into account suggests that there is an inevitable trade-off between efficiency in production and efficiency in consumption. As the Supreme Court noted in *Sony v Universal*:

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<sup>28</sup> KENNETH J. ARROW, ECONOMIC WELFARE AND THE ALLOCATION OF RESOURCES FOR INVENTION, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 614-15 (Nat'l Bureau of Econ. Research ed., 1962); Richard R. Nelson, *The Simple Economics of Basic Scientific Research*, 67 J. POL. ECON. 297, 297-306 (1959).

<sup>29</sup> *Id.* See also Menell & Scotchmer, *supra* note 22, at 3. (The main defect of intellectual property is that it results in a dead weight loss to consumers).

<sup>30</sup> While subsequent authors can offer other works in competition with the author, no one may offer the exact same work, or a substantially similar work, to the public without the author's permission. It is the author's expectation of the ability to price above marginal cost that induces her investment in production in the first place. The copyright monopoly should not be equated with an economic monopoly because there may be close substitutes for the author's work that are non-infringing. See, *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 2006 U.S. LEXIS 2024 (U.S. 2006) (A patent does not necessarily confer market power upon the patentee. In all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product.)

<sup>31</sup> Assuming the absence of perfect price discrimination. See Kathleen Carroll and Dennis Coates, *Teaching Price Discrimination: Some Clarification*, 66 S. ECON. J. 466 (1999). (The assumption that price discrimination is efficient is an unfortunate oversimplification.)

<sup>32</sup> Deadweight loss refers to any permanent loss of social welfare. See Shavell, *supra* note 19.

[Copyright requires] a difficult balance between the interests of authors and inventors in the control and exploitation of their writings and discoveries on the one hand, and society's competing interest in the free flow of ideas, information, and commerce on the other hand.<sup>33</sup>

The trade-off between efficiency in production and efficiency in consumption is essentially a comparison of dynamic benefits and static costs.<sup>34</sup> Copyright has dynamic benefits in that it creates incentives to invest in the creation of new intellectual and creative works. Copyright has static costs comprised of the consumer deadweight loss resulting from higher prices, the concentration of market power, and possible stifling of alternative points of view. In the classic model, the optimal assignment of copyright rights is determined by a balance the dynamic incentives against static deadweight losses.<sup>35</sup> More recently, scholars have begun to question whether this simple trade-off between access and incentives describes the full effects of intellectual property.<sup>36</sup> This article offers one such challenge to the traditional model by emphasizing the centrality of copyright scope and the importance of doctrinal efficiency.

## PART II – COPYRIGHT SCOPE AND DOCTRINAL EFFICIENCY

This Part explores the relationship between copyright scope, doctrinal efficiency and welfare from a theoretical perspective. Establishing what is known and what is unknown about that relationship provides an important tool for evaluating specific

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<sup>33</sup> Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984).

<sup>34</sup> *Id.* at 618; *See also*, Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. ECON. PERSP. 29–41 (1991); RICHARD POSNER, *ECONOMIC ANALYSIS OF LAW* 36-50 (5th ed. 1998).

<sup>35</sup> William Landes & Richard Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989). Landes and Posner have recently expanded on their work in their recent book, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* (2003).

<sup>36</sup> Tim Wu, *Intellectual Property, Innovation, and Decision Architectures*, 92 VA. L. REV. (forthcoming 2006), available at <http://ssrn.com/abstract=726561>.

doctrinal recommendations in copyright law, especially those deriving from law and economics analysis. This method is useful given the number and variety of recommendations that implicitly rely on some underlying theory the scope-welfare relationship.<sup>37</sup> Part II.A. explains the concept of copyright scope in legal, practical and economic terms. It also briefly discusses how the model developed in this article differs from the traditional model of the welfare effects of copyright as expounded by Landes and Posner.<sup>38</sup> Part II.B. develops the model in relation to copyright scope. Part II.C. then expands the model by introducing the concept of doctrinal efficiency. Finally, Part II.D explains how the abstract modeling exercise in the earlier sub-parts can be rendered into concrete metrics for evaluating doctrinal proposals.

### A. Copyright Scope

What is copyright scope? The simplest way to define copyright scope is to distinguish it from the other element of copyright protection – duration. Copyright duration simply refers to how long the rights of the copyright owner last. Copyright duration was initially a mere 14 years, renewable for another 14 years,<sup>39</sup> but now extends to the life of the author plus 70 years.<sup>40</sup> In contrast to duration, the scope or breadth of copyright determines the effect of the author’s rights at any given point in time.

Copyright scope has both a formal legal dimension and a practical dimension. The combination of both of these dimensions defines copyright scope in economic terms. In formal legal terms, scope depends on the combined effects of various elements of

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<sup>37</sup> See, *supra* note 8 and accompanying text.

<sup>38</sup> See, Landes & Posner, *supra* note 35.

<sup>39</sup> Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124 (1790 Act).

<sup>40</sup> For works created by identified natural persons, copyright now lasts from the moment the work is created until 70 years after the author’s death, see 17 U.S.C. § 302(a) (2005). For anonymous works, pseudonymous works, and works made for hire, the copyright term is 95 years from publication or 120 years from creation, whichever expires first, 17 U.S.C. § 302(c) (2005).

copyright law such as: the idea-expression distinction,<sup>41</sup> the test of substantial similarity,<sup>42</sup> the fair use doctrine,<sup>43</sup> the doctrines of contributory and vicarious liability (together “secondary liability”),<sup>44</sup> and anti-circumvention liability under the Digital Millennium Copyright Act (“DMCA”).<sup>45</sup> The practical dimension of copyright scope relates to the extent that the copyright owner’s formal legal rights can be enforced in the real world. As the recording industry is well aware, merely possess nominal legal rights does not mean that you are in a position to enforce them,<sup>46</sup> or that you would necessarily want to.<sup>47</sup>

In economic terms, scope can be envisaged spatially, as the distance between the author’s work and the closest non-infringing substitute.<sup>48</sup> Alternatively, scope can be thought of as determining the cost of entry into the market occupied by the copyrighted

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<sup>41</sup> Codified in 17 U.S.C. § 102 (b) (“In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”)

<sup>42</sup> See e.g., *Newton v. Diamond*, 349 F.3d 591, 594 (9th Cir. 2003) (Even where the fact of copying is conceded, no legal consequences will follow from that fact unless the copying is substantial.) See also 1 MELVIN B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 3.01 at 3-3 (2002).

<sup>43</sup> Codified in 17 U.S.C. § 107 (“Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, ... is not an infringement of copyright.”)

<sup>44</sup> The Copyright Act does not expressly provide for secondary liability, but courts have consistently held that the doctrines of vicarious and contributory liability emerge from common law principles and are well established in the law. See *Sony*, 464 U.S., at 434; *MGM Studios Inc. v. Grokster, Ltd.*, 125 S. Ct. 2764, 2776 (2005).

<sup>45</sup> Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998). The anti-circumvention provisions are codified in 17 U.S.C. § 1201.

<sup>46</sup> See Tim Wu, *When Code Isn’t Law*, 89 VA. L. REV. 679, 683 (2003) (Commenting that the “efforts of P2P programmers have provided computer-savvy music listeners with a continuing reduction in the costs of the copyright system, comparable to a temporary repeal of copyright laws for computer geeks.”)

<sup>47</sup> Matthew Sag, *Twelve Year-Olds, Grandmothers, And Other Good Targets For The Recording Industry’s File Sharing Litigation*, NW. J. TECH. & INTELL. PROP. (Forthcoming 2006) (Reviewing the rationality of the recording industry’s litigation against individual file sharers.)

<sup>48</sup> See Paul Klemperer, *How Broad Should the Scope of Patent Protection Be?*, 21 RAND J. ECON. 113 (1990). See also Menell & Scotchmer, *supra* note 22, at 14; Michael Abramowicz, *An Industrial Organization Approach To Copyright Law*, 46 WM. & MARY L. REV. 33 (2004) (applying the Hotelling and Salop economic models of product differentiation to copyright); Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212 (2004) (also applying economic models of product differentiation to copyright, but with different conclusions). See generally JEAN TIROLE, *THE THEORY OF INDUSTRIAL ORGANIZATION* 96-131 (1998).

work.<sup>49</sup> The limit of both of these formulations is that they imply knowledge of, and compliance with, the law. Alternatively, we can define the scope of an individual copyright as the extent to which its owner can use copyright law to impose costs on third parties or exclude them from certain markets altogether. The advantage of this definition is that it looks to the real economic power copyright establishes and does not assume compliance with the law.

The meanings of these various formulations of copyright scope become clearer in application. For example in *Grokster*,<sup>50</sup> the Supreme Court recently addressed the liability of technology developers whose products can be used for both lawful and unlawful purposes. In formal legal terms, it is quite clear that indiscriminately distributing copies of music files over the internet is within the scope of the copyright owner's exclusive rights and is therefore infringing if done without permission.<sup>51</sup> However, because of the practical limitations of suing end users for infringement, the copyright owners in *Grokster* asked the Court to expand the scope of their rights to allow them to prevent technology developers from enabling end user infringement.<sup>52</sup> In other words, the copyright owners sought to overcome the limits in the practical scope of their rights *vis-à-vis* end users by increasing the formal scope of their rights *vis-à-vis* technology developers. From an economic perspective the question of copyright scope in *Grokster* can be framed as follows: when does copyright in a sound recording give its owner the right to control

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<sup>49</sup> Nancy T. Gallini, *Patent Policy and Costly Imitation*, 23 RAND J. ECON. 52 (1992). See also, Menell & Scotchmer, *supra* note 22, at 14.

<sup>50</sup> MGM Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764 (2005).

<sup>51</sup> A&M Records v. Napster, Inc., 239 F.3d 1004, 1018-1019 (9th Cir. 2001). See also BMG Music v. Gonzalez, 430 F.3d 888, 891 (7th Cir. 2005).

<sup>52</sup> MGM Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2775 (2005). ("When a widely shared service or product is used to commit infringement, it may be impossible to enforce rights in the protected work effectively against all direct infringers, the only practical alternative being to go against the distributor of the copying device for secondary liability on a theory of contributory or vicarious infringement.")

technology that may be used to reproduce or distribute copies of that sound recording? The Supreme Court chose to answer only a fragment of this question in *Grokster*. The Court unanimously concluded that “one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.”<sup>53</sup> The majority opinion was content to decide the case on inducement and expressly declined to revisit *Sony* any further.<sup>54</sup> Ultimately, the Supreme Court’s decision expands the scope of the rights held by the motion picture and music recording industries, but nearly as much as they had hoped for.<sup>55</sup>

Reverse engineering computer software provides a second example of the different formulations of copyright scope. Reverse engineering requires making copies of copyrighted computer software and thus superficially appears to be copyright infringement.<sup>56</sup> However, reverse engineering is only necessary because software distributed in object code contains ideas and performs functions that are not entitled to copyright protection.<sup>57</sup> If reverse engineering was found to be infringement, the practical scope of the copyright owner’s rights would be extended far beyond the expression of her

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<sup>53</sup> *Id.* at 2776.

<sup>54</sup> *Id.* at 2778-2779. The concurring opinion of Justice Ginsburg (joined by Chief Justice Rehnquist and Justice Kennedy) would have substantially narrowed the application of the *Sony* doctrine by adopting a ratio test in relation to substantial non-infringing use. *Id.* at 2783. In contrast the concurring opinion of Justice Breyer (joined by Justice Stevens and O’Connor) expressly rejected the application of a ratio test in relation to substantial non-infringing use. *Id.* at 2788.

<sup>55</sup> The *Grokster* decision is discussed in more detail below, see *infra* Part II.D.

<sup>56</sup> *See*, 17 U.S.C. 106 (Copyright owner’s exclusive rights include the right to reproduce the work.)

<sup>57</sup> *See*, 17 U.S.C. § 102 (b). For an explanation of the difference between source code and object code, see, Daniel Lin, Matthew Sag & Ronald S. Laurie, *Source Code Versus Object Code: Patent Implications for the Open Source Community*, [18 Santa Clara Computer & High Tech. L.J. 235, 238-239 \(2002\)](#).

ideas. Courts have understandably resisted this outcome and applied the fair use doctrine to limit the scope of copyright in this regard.<sup>58</sup>

In reverse engineering and other fair use contexts, courts have directly confronted the question of the economic scope of copyright. The fourth statutory factor that courts must consider in adjudicating fair use cases is the effect of the defendant's use "upon the potential market for, or value of, the copyrighted work."<sup>59</sup> In applying this factor, courts must not only consider whether there is a market effect in general, they must also determine whether the defendant's conduct intrudes on the legitimate scope of the copyright owner's rights. For example, in *Campbell*, the Supreme Court drew an important distinction between the copyright owner's general economic interests from the limited protection afforded by copyright.<sup>60</sup> The Court held that copyright neither protects the author from parody, nor recognizes a protectable derivative market for criticism in general.<sup>61</sup> Just as *Campbell* recognizes that criticism is outside of the copyright owner's protectable sphere of interest, the reverse engineering cases recognize that the copyright owner has no protectable interest in preventing the copying of unprotectable expression and ideas buried within its object code. In *Sony v Connectix*, the Ninth Circuit held that although the defendant's Virtual Game Station console directly competed with Sony in the market for gaming platforms compatible with Sony games, the Virtual Game Station

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<sup>58</sup> See e.g., *Sony Computer Entertainment, Inc. v. Connectix Corp.*, 203 F.3d 596, 602 (9th Cir. 2000), cert. denied, 531 U.S. 871 (2000) ("We are called upon once again to apply the principles of copyright law to computers and their software, to determine what must be protected as expression and what must be made accessible to the public as function."); *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832 (Fed. Cir. 1992); *Sega Enter. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1520 (9th Cir. 1992); see also David A. Rice, *Copyright and Contract: Preemption After Bowers v. Baystate*, 9 ROGER WILLIAMS U. L. REV. 595, 601 n.19 (2004) (further references).

<sup>59</sup> 17 U.S.C. § 107 (2005). The statutory codification of the fair use doctrine requires courts to consider four factors in determining whether a use is fair: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion taken; and (4) the effect of the use upon the potential market for, or value of, the copyrighted work. *Id.*

<sup>60</sup> *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 591-592 (1994).

<sup>61</sup> *Id.* at 592.

was a “legitimate competitor” in that market.<sup>62</sup> The court concluded that Sony's desire to control the market for gaming platforms was “understandable” but that “copyright law ... does not confer such a monopoly.”<sup>63</sup>

The potential application of secondary liability to the makers of peer-to-peer technology and the application of fair use to reverse engineering both illustrate the importance of understanding copyright scope from an economic dimension and how that economic understanding ultimately feeds back into doctrinal questions.

The model of the welfare effects of copyright scope developed in the next section is clearly influenced by William Landes and Richard Posner’s pioneering article, *An Economic Analysis of Copyright*.<sup>64</sup> The Landes and Posner model of the welfare effects of copyright describes the operation of copyright by analyzing the extent of copyright protection, broadly defined. The core difficulty with the Landes and Posner approach is that knowledge of the optimum level of copyright protection does not translate directly into the types of doctrinal decisions that judges have to make.<sup>65</sup>

The traditional single variable model’s focus on overall copyright reward comes at the cost of significant indeterminacy. The Landes and Posner model treats copyright protection as a single variable (*Z*) and examines the relationship between *Z*, the cost of

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<sup>62</sup> Sony Computer Entertainment, Inc. v. Connectix Corp., 203 F.3d 596, 607 (9th Cir. 2000); see also, Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1522-23 (9th Cir. 1993).

<sup>63</sup> Sony Computer, 203 F.3d at 607; see also, Sega, 977 F.2d at 1523-24 (An attempt to monopolize the market by making it impossible for others to compete runs counter to the statutory purpose of promoting creative expression and cannot constitute a strong equitable basis for resisting the invocation of the fair use doctrine).

<sup>64</sup> Landes & Posner, *supra* note 35.

<sup>65</sup> This is the same observation that Robert Merges and Richard Nelson made with respect to patent law over 15 years ago, but its application to copyright has rarely been systematically pursued. See, Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 875 (1990). Mark Lemley’s comparison of the treatment of incremental innovation in patent and copyright comes closest. See Lemley, *The Economics of Improvement*, *supra* note 5 **Error! Bookmark not defined.**

producing copyrightable works, and the number of works produced.<sup>66</sup> Landes and Posner developed their model as a vehicle through which to examine the field of copyright as a whole from an economic standpoint, and to see to what extent copyright law could be explained as a means for promoting the efficient allocation of resources.<sup>67</sup> In that context, the model serves its purpose, but as a vehicle for translating economic analysis into doctrinal recommendations, the model is limited by its own generality.<sup>68</sup>

Assuming that our core interest lies in the economic analysis of individual copyright doctrines,<sup>69</sup> the Landes and Posner model can be simplified by treating duration as exogenous. Another reason to treat duration as exogenous to economic models of copyright is that it appears to be determined solely with reference to political criteria, not social welfare criteria.<sup>70</sup> After the Supreme Court's validation of the CTEA in *Eldred*,<sup>71</sup> it is clear that no matter how ill-conceived the congressional policy in favor of long (and expanding) copyright terms is, nothing written by economists or law professors is likely

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<sup>66</sup> Landes & Posner, *supra* note 35, at 325.

<sup>67</sup> *Id.*

<sup>68</sup> Landes and Posner do undertake a significant normative analysis of copyright doctrine, but that analysis is largely disconnected from their model. Additionally, the authors' doctrinal recommendations are primarily in the form of *ex post* justifications for existing doctrines. *Id.* at 344-63. See James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CAL. L. REV. 1413, 1447 (1992) ("Landes and Posner describe copyright as constructed by the tension between the need to grant legally protected interests to authors in order to motivate them and the need to limit the rights of authors so as to allow future creators legal access to the raw materials they need. This seems reasonable enough, but it also leaves them dangerously close to the mushy "balancing" analysis from which economics was supposed to provide surcease.")

<sup>69</sup> Which is not the primary purpose for which Landes and Posner designed their model. Landes & Posner, *supra* note 35, at 325.

<sup>70</sup> This is the predominant view, see Robert P. Merges, *One Hundred Years of Solicitude: Intellectual Property Law, 1900-2000*, 88 CAL. L. REV. 2187, 2236-37 (2000) (describing the CTEA extension as "virtually worthless" from an incentive perspective, and "a classic instance of almost pure rent-seeking legislation."). See also *Eldred v. Ashcroft*, 537 U.S. 186, 255 (U.S., 2003) (Breyer, J., dissenting). There are exceptions. See, e.g., Stan J. Liebowitz & Stephen Margolis, *Seventeen Famous Economists Weigh In On Copyright: The Role Of Theory, Empirics, And Network Effects*, 18 HARV. J.L. & TECH. 435 (2005).

<sup>71</sup> *Eldred v. Ashcroft*, 537 U.S. 186 (2003). In 1998, Congress enacted the Sonny Bono Copyright Term Extension Act (CTEA) which extended the terms of all existing and future copyrights by a further 20 years. In *Eldred*, the Court upheld the constitutionality of the CTEA and rejected the argument that a retrospective term extension violates the "limited times" prescription of the Copyright Clause. *Id.*

to change it. The appropriate combination of duration and scope in copyright is an interesting intellectual puzzle, but for the reasons given above, copyright scope should be the focus of our analysis, taking the current (extraordinarily long) duration as given.<sup>72</sup>

### **B. The Welfare Effects of Changes in Copyright Scope**

This section develops a model of the welfare effects of a change in copyright scope in four stages. First, it begins with a simple intuitive model of the welfare effects of a change in copyright scope by imagining the consequences of the opposing extremes of copyright scope:  $S_0$  such that only identical works are capable of infringement, and  $S_\infty$  such that even the slightest similarity rendered liability for infringement. This simple model leads to the proposition that the welfare/scope curve is convex, such that the optimum level of copyright scope is more than nothing ( $S_0$ ), but less than everything ( $S_\infty$ ).

The second stage complicates the model by considering the effect of private ordering, i.e. the effective market reallocation of rights through licensing or the consolidation of production into firms. Advocates of efficient private ordering reject the automatic conclusion that increasing copyright scope is likely to increase the cost of expression more than it increases the incentive effect. They acknowledge that an increase in copyright scope may raise the cost of expression for some authors, but they argue that those costs will, on average, be off-set by their increased prospective reward.<sup>73</sup>

The fourth and final stage adds further complexity by arguing that there is no singular welfare-scope relationship. Instead, different industries, markets, and modes of

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<sup>72</sup> This analysis does not take into account the economic function that formalities once had in copyright. See Christopher Sprigman, *Reform(aliz)ing Copyright*, 57 STAN. L. REV. 485 (2004).

<sup>73</sup> See, e.g. Menell & Scotchmer, *supra* note 22, 23-24; Tom W. Bell, *Fair Use vs. Fared Use: The Impact Of Automated Rights Management On Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557, 584 (1998); I. Trotter Hardy, *Property in Cyberspace*, 1996 U. CHI. LEGAL F. 217.

production will experience different welfare-scope relationships simultaneously. Empirical assessment of the likely welfare effects of a change in copyright scope is rendered extremely difficult by the indeterminacy of copyright scope and the likelihood of inter-industry effects. This suggests that attempts to calibrate individual copyright doctrines to optimize scope may be more difficult than previously acknowledged.

### **Stage 1: The simple model**

The welfare effects of an increase in copyright scope are uncertain in the abstract. Like copyright protection more generally, any change in copyright scope will have effects on (i) the author's potential reward for the production of a work, (ii) the author's cost of expression and (iii) the administrative costs of the copyright system.

In isolation, the prospect of an increased reward should increase the production of copyrighted works. However, the same expansion of copyright scope may also increase the author's cost of expression. For example, faced with a legal regime that required brief quotations to be licensed, some authors would expend resources on attaining such licenses, whereas other would find it more economical to avoid that cost by summarizing instead of quoting. In either case, such a regime increases the cost of expression for second generation authors.<sup>74</sup> An expansion of copyright scope might also increase the administrative costs of the copyright system, depending on the nature of the rule in question. For example, a rule that requires case by case adjudication would tend to cause more cases to be litigated and would thus increase state expenditure on judges, court houses etc. The net effect of increasing copyright scope will depend on whether the costs of expansion outweigh the benefits, or vice-versa.

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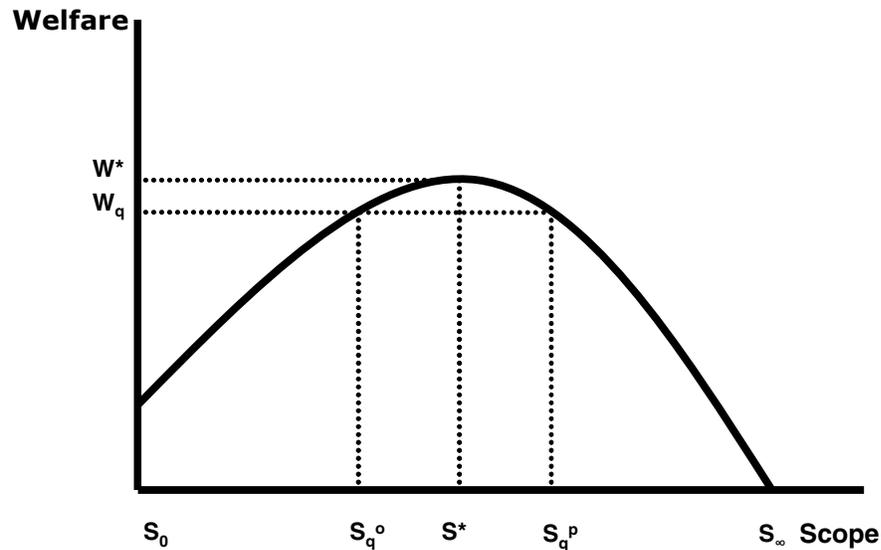
<sup>74</sup> The term second generation author refers to an author whose work requires the use of part of the work of a previous author.

Assume for the moment that the scope of copyright was so narrow as to permit any kind of re-use of a work unless it was a virtually identical reproduction of the original work. In that case, an expansion of copyright scope would almost certainly be welfare improving, as the positive effects of increased incentives would dominate any concerns as to the increased cost of expression. In this scenario, rival publishers could reprint an author's work with only superficial changes, thus making it more difficult for the author to recover her investment or make a profit. Expanding the scope of copyright from this narrow starting point is likely to increase the author's ability to price over marginal cost and will create better incentives for the investment of time and resources into the production of copyrightable works. But note that because almost every copyrightable work relates in some fashion to works that preceded it, increasing copyright scope to the point of infinite breadth will increase the author's cost of expression more than it adds to her investment incentives.

Figure 1 represents the intuition that there is some ideal or maximally efficient scope of copyright. It represents welfare on the vertical axis and scope on the horizontal axis. The welfare-scope curve is convex, such that there exists a point  $S^*$ , the level of scope at which welfare is maximized. An increase in scope from  $S_q^o$  to  $S^*$  will be welfare improving, but any further increase (from  $S^*$  to onwards) has the reverse effect, as the difficulty of creating new works while incorporating less and less of existing works begins to overwhelm the incentive effects.<sup>75</sup>

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<sup>75</sup> The notation used here is as follows:  $S$  denotes copyright scope,  $S_q$  denotes the status quo level of copyright scope, the super-scripts  $o$  and  $p$  denote copyright optimism and copyright pessimism as explained in the text.  $W$  denoted social welfare,  $W_q$  denotes the status quo level of welfare,  $W^*$  denotes the maximum level of welfare achieved at the apex of the scope/welfare curve.

**Figure 1. Copyright scope as a function of welfare**

This representation of the welfare effects of copyright scope does not indicate whether the current level of copyright scope is in fact greater than or less than  $S^*$ . Views on this question sharply diverge. Paul Goldstein neatly summarizes the opposing viewpoints in his description of “copyright optimism” versus “copyright pessimism.” Goldstein frames the debate as follows:

On one side are lawyers who assert that copyright is rooted in natural justice, entitling authors to every last penny that other people will pay to obtain copies of their works. These are the copyright optimists: they view copyright’s cup of entitlement as always half-full, only waiting to be filled still further. On the other side of the debate are copyright pessimists, who see copyright’s cup as half empty: they accept that copyright owners should get some measure of control over copies as an incentive to produce creative works, but they would like copyright to extend only so far as an encroachment on the general freedom of everyone to write and say what they please.<sup>76</sup>

<sup>76</sup> Goldstein, *supra* note 2 at 15.

Copyright pessimists and copyright optimists disagree about where the status quo ( $S_q$ ) is on the scope/welfare curve. Copyright pessimists accept that intellectual property protection is beneficial up to a point, but they argue that the current climate of broad exclusive rights has extended copyright too far.<sup>77</sup> The copyright pessimist view is represented on Figure 1 by the point ( $S_q^p, W_q$ ), at which the curve is downward-sloping, with any increase in scope causing a reduction in net welfare. In contrast, copyright optimists believe that greater protection of intellectual property will encourage even further investment.<sup>78</sup> The copyright optimist view is represented on Figure 1 by the point ( $S_q^o, W_q$ ), at which the curve is upward-sloping with any increase in scope improving net welfare. Note that both  $S_q^p$  and  $S_q^o$  are associated with welfare level  $W_q$ , illustrating that it is possible to agree on the current benefits of the copyright system but still disagree on whether copyright scope is too broad, or too narrow.

The intuition that there are diminishing returns to increasing the scope of copyright is reflected in common law statements about the importance of safeguarding sequential innovation. In *Campbell v. Acuff Rose*, the Supreme Court identified an

... inherent tension in the need simultaneously to protect copyrighted material and to allow others to build upon it.<sup>79</sup>

The Court, borrowing from Justice Story in *Emerson v. Davies*, also said that

... in literature, in science and in art, there are, and can be, few, if any, things, which in an abstract sense, are strictly new and original throughout. Every book in literature, science and art, borrows, and must necessarily borrow, and use much which was well known and used before.<sup>80</sup>

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<sup>77</sup> See, e.g., LESSIG, FREE CULTURE, *supra* note 1.

<sup>78</sup> Goldstein himself falls into this camp; his recommendation is essentially to “extend rights into every corner where consumers derive value from literary and artistic works.” GOLDSTEIN, *supra* note 2, at 236.

<sup>79</sup> *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 575 (1994).

<sup>80</sup> *Id.* See also, *Carey v. Kearsley*, 170 Eng. Rep. 679, 681 (K. B. 1803), per Lord Ellenborough.

This common law view is reflected in the simple model.

### **Stage 2: The effects of private ordering**

The problem with the simple model is that it fails to take into account the mitigating effects of private ordering. The simple model overstates the extent to which copyright scope must be limited because, even assuming that all authors do in fact borrow from pre-existing works, second generation authors can avoid conflicting property rights through private ordering. Menell and Scotchmer argue that if firms can license to avoid conflicting property rights, rather than being forced into the costly activity of avoiding them, the harm of too much protection may be largely reversed.<sup>81</sup> Although Menell and Scotchmer's argument concentrates on private ordering through the licensing (the market), efficient private ordering can also be achieved through the collectivization of information production (the firm).<sup>82</sup>

The prospect of efficient private ordering fundamentally challenges the simple model's assumption that increasing copyright scope is likely to increase the cost of expression more than the incentive effect at some point. As Ronald Coase (another Nobel Prize winning economist) made clear, the initial legal allocation of legal entitlements should not be confused with their ultimate allocation by the market.<sup>83</sup> For example, a court may give party A the right to pollute, or it may give party B the right not to be polluted; either way the parties will trade their rights if the other party values the right more. Theoretically, if the market for intellectual property rights was perfectly efficient, any increase in the cost of expression caused by an expansion of copyright scope could be

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<sup>81</sup> Menell & Scotchmer, *supra* note 22, at 24.

<sup>82</sup> See, Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937), reprinted in Ronald H. Coase, *THE FIRM, THE MARKET, AND THE LAW* 33 (1988).

<sup>83</sup> Ronald H. Coase, *The Problem of Social Cost*, 3 *J.L. & ECON.* 1 (1960).

off-set by the increased expected rewards.<sup>84</sup> Subsequent authors seeking to build on an existing work may face higher costs, but those costs should be off-set by their increased prospective reward.<sup>85</sup>

In a Coasian world, without transaction costs or other market imperfections, there is no reason to assume that increasing copyright scope ever reduces welfare. But it must also be noted that in a truly Coasian world, there would be no reason to assume that any level of copyright scope was superior. The reason for this is that if there are literally no transaction costs, an author can contract with the whole world to obtain their assurance of sufficient rewards for her endeavors – she does not need copyright. Similarly, if copyright broad copyright scope does no harm in a zero transaction cost world because second generation authors can always contract with copyright owners for any rights they need.

In a Coasian world we could replace copyright with contract entirely, or we could have neither and rely on the government to reward each author with the exact social value of her creation. The Coase theory has important implications because it suggests that when there are transaction costs that property rights should be allocated to minimize them, but the conversely, the theory implies that in a zero transactions cost world every possible allocation is equally attractive. It is important to understand that we do not have property rights because there are no transaction costs, we have property rights to reduce transaction costs and because sometimes property rights are the lowest transaction costs solution. So the relevant assumption is for efficient private ordering is not that there are

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<sup>84</sup> In theory, increasing the ratio of the copyright owner's private benefit to the social benefit of a work should perfect her incentives to produce. But that assumes that the process of internalization does not reduce the overall size of the pie, as it surely must if taken to extremes. As Mark Lemley points out, "[i]n no other area of the economy do we permit the full internalization of social benefits." Lemley, *Property, Intellectual Property, and Free Riding*, *supra* note 5, at 1032.

<sup>85</sup> Menell & Scotchmer, *supra* note 22, at 23-24.

no transaction costs, but rather that markets will be very efficient if property rights are allocated, or at least that they will be more efficient than private contract, direct government intervention, or the too often neglected alternative of doing nothing at all. In some ways this is an optimistic assumption about markets, in other ways it is a pessimistic assumption about the alternatives. For the sake of brevity I will refer to this view as market optimism.<sup>86</sup>

The accuracy of this market optimist view of the welfare effects of copyright scope depends on the efficiency of private ordering. Adding fuel to the fire of optimism, Robert Merges points to the success of collective rights organizations such as the American Society of Composers, Authors and Publishers (“ASCAP”) and certain patent pools, to argue that even if transactions costs are initially high, market solutions will often emerge to reduce them.<sup>87</sup> Merges describes a process whereby repeat players in high transaction costs industries form collective rights organizations to administer their rights, effectively exchanging their property entitlements for liability rules.<sup>88</sup> This suggests that even where copyright pessimists can identify apparent market failures in the short run, in the long run the market itself will address these problems.

Although ASCAP has an impressive history, it is important to keep in mind its limitations. One of ASCAP’s main functions is providing off-the-shelf licenses for the public performance of musical works. From the perspective of its customers, ASCAP lowers search and negotiation costs authors might otherwise encounter if they had to find and deal with each author separately. From the perspective of its members, ASCAP also

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<sup>86</sup> Julie Cohen labels proponents of similar views as “Cyber-cons.” I prefer the less pejorative term “market optimist.” See Cohen, *supra* note 5, at 464.

<sup>87</sup> Robert P. Merges, *Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations* 84 CAL. L. REV. 1293 (1996).

<sup>88</sup> *Id.*

lowers negotiation costs; in addition it lowers the cost of monitoring and enforcing authors rights, which would be prohibitive on a case by case basis. However, ASCAP primarily deals in the world of complete literal infringement, where rights are fairly certain. There is no reason to believe that effective collective rights organizations would develop in scenarios of non-literal infringement in the absence of high volume, relatively uniform transactions between repeat players.<sup>89</sup>

The case for strong market optimism in copyright is limited by the nature of the expansive nature of copyright itself. It is almost axiomatic in conventional law and economics literature that the allocation of property rights increases certainty.<sup>90</sup> For copyright, the opposite may be true. As copyright scope expands, rights become increasingly vague – not increasingly well defined. So it becomes increasingly difficult to know whose rights you might be infringing with any given work.<sup>91</sup> Harold Demsetz’s *descriptive* proposition that property rights evolve in response to increased value of the underlying object has clear application to copyright.<sup>92</sup> The increasing importance of information has been one of the primary rallying points of those who advocate extending the scope and duration of copyright. Nonetheless, Brett Frischmann (among others) questions the *normative* gloss of the Demsetzian thesis that property rights *should* extend in response to increased value.<sup>93</sup> Where the benefits of increased propertization are concentrated, the application of basic public choice theory predicts that the level of

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<sup>89</sup> Merges acknowledges this limitation, noting that “[o]nly repeated transactions among right holders will give rise to the private institutions discussed in this Article. One-shot or sporadic interactions do not justify investments in exchange institutions.” *Id.* at 1319.

<sup>90</sup> Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, U. CHI. LEGAL F. 207, 209 (1996) (noting that when property rights are poorly specified, it is hard to transact about them, and correspondingly hard to promote the process of transaction that allocates resources to their highest valued uses).

<sup>91</sup> The same argument can be made with respect to copyright duration: the passage of time makes tracing all the possible overlapping rights holders exponentially more complicated.

<sup>92</sup> See Frischmann, *The Demsetzian Trend in Copyright*, (working paper).

<sup>93</sup> *Id.*

proPERTIZATION will exceed the Demsetzian equilibrium and property rights will be extended beyond the point where the social benefit of proPERTIZATION outweighs the social cost.

Frischmann questions the merits of ever-expanding copyright for two fundamental reasons. First, not all externalities distort allocative decision making by the producers of first generation products.<sup>94</sup> Second, the market will tend to undervalue information with positive externalities, especially if that information is used as infrastructure.<sup>95</sup> There are other reasons to doubt that property rights should always be expanded as the value of the underlying object increases. Expanding the scope of copyright may increase the administrative costs of the copyright system, the cost of dispute resolution or other costs related to uncertainty costs borne by second generation authors.

A potential cause of inefficiency that deserves greater attention is the implications of strategic behavior and uncertainty. Market optimists who rely on the extensive reallocation of permissions through licensing must take into account the increased significance of strategic behavior encouraged by increased market participation. Obviously, if a change in copyright scope increases a second generation author's need to "go to the market" to attain copyright permissions, she clearly faces increased transaction costs. But, in addition, she must also contend with the risk that first generation authors will strategically use their hold-up power to extract the highest license fees possible. So, relying exclusively on market mechanisms of exchange creates the danger that strategic exploitation of the market system can reduce aggregate welfare.

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<sup>94</sup> *Id.* (Externalities are ubiquitous in society, and in a wide variety of contexts, externalities are simultaneously valuable to society and yet irrelevant to investment decisions, or more generally, to resource allocation by the market.) See also David D. Haddock, *Irrelevant Externality Angst* (working paper on file with the author).

<sup>95</sup> Frischmann, *supra* note 92.

Another potential cause of doctrinal inefficiency that deserves greater attention is the possibility that private ordering may reduce the diversity of information production or result in overly-centralized decision making architectures.<sup>96</sup> Increases in copyright scope may reduce diversity by increasing the concentration of information production, or by concentrating too much decision making power in the hands of first generation authors.<sup>97</sup> For example, a recent Sixth Circuit Court of Appeals decision has held that any digital music sampling, no matter how brief, nor how unrecognizable, requires a license from the copyright owner.<sup>98</sup> Under this interpretation of the law,<sup>99</sup> artists who use a lot of music samples are likely to gravitate towards large labels that offer them a significant catalog of primary material, where they can be sure of attaining the required permissions on reasonable terms. Even if this does not reduce the production of music genres such as hip-hop, it may tend to centralize production under the roof of the large recording studios that already dominate the industry, and thus potentially reduce diversity of expression which is an important part of consumer welfare in the context of copyright.

Similarly, very high levels of copyright scope can concentrate the power to choose the direction of new technology in undesirable ways. Digital music technology illustrates this problem.<sup>100</sup> If copyright scope were much greater than it currently is, consumers would be infringing the rights of copyright owners every time they transferred music from a CD onto a digital music player. Digital music players such as the iPod increase the

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<sup>96</sup> See e.g. Yochai Benkler, *Intellectual Property and the Organization of Information Production*, 22 INT'L. REV. L. & ECON. 81 (2002); Wu, *supra* note 36

<sup>97</sup> *Id.*

<sup>98</sup> *Bridgeport Music v. Dimension Films*, 410 F.3d 792 (6th Cir., 2005). As the court so eloquently stated, "Get a license or do not sample."

<sup>99</sup> For a thoughtful critique of the *Bridgeport* decision, see Sang Lee, *De Minimis Taking, Digital Sampling, and Copyright Infringement: A New Dissonance in Production*, N.W. U. L. REV. (forthcoming 2006).

<sup>100</sup> This example expands on Tim Wu's general point about the decentralizing function of fair use in copyright law. See Wu, *supra* note 36.

value of music for consumers; these devices give consumers more opportunities to enjoy the music they have already purchased. However, digital music players that play unencrypted music files (as most do) present a threat to the recording industry because they work equally well with music unlawfully acquired from peer-to-peer file sharing services. If the ordinary consumer use of the iPod constituted copyright infringement, then it is likely that Apple, the iPod's manufacturer, would be liable for its customers' copyright violations under the Supreme Court's recently announced theory of "inducing infringement."<sup>101</sup> In this scenario Apple may be liable under other theories of secondary liability as well, assuming that any alternative uses for the iPod were judged to be insubstantial.

The prospects for private ordering under this scenario look bleak. Apple could have approached the record labels to seek their permission to develop and market the iPod, but it is unlikely that such permission would have been forthcoming at a reasonable price or at any price at all. The recording industry has substantial fixed investments in the physical distribution of music, and it is doubtful that it would ever have moved away from that model voluntarily.<sup>102</sup> But, in point of fact, Apple did not need to seek the recording industry's permission to explore this new technology because consumer copying for the sole purpose of space-shifting to a digital music player is fair use.<sup>103</sup> Because space-shifting to a digital music player is fair use, the iPod has a clearly substantial non-infringing use and Apple's promotion of that use does not constitute inducing

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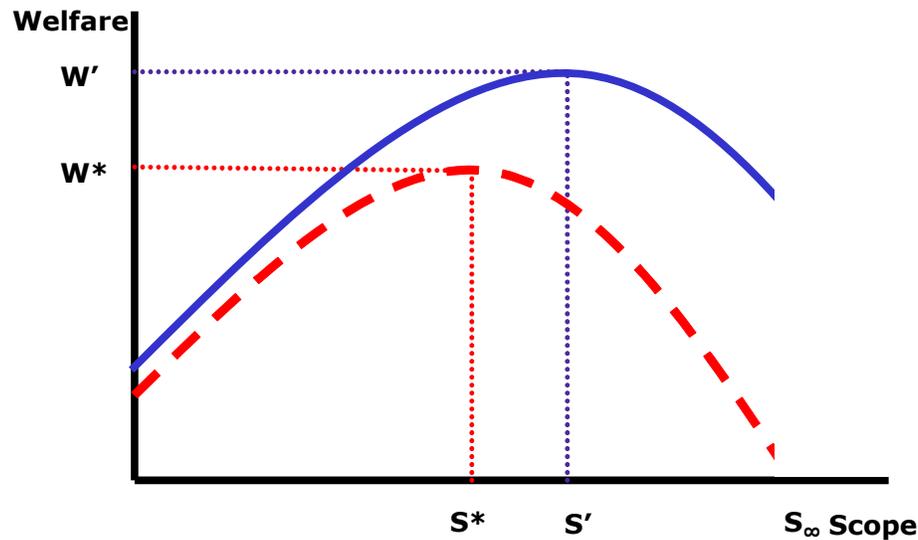
<sup>101</sup> MGM Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764 (2005).

<sup>102</sup> Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys., Inc., 180 F.3d 1072 (9th Cir. 1999) (The recording industry's legal challenge to the Rio portable MP3 player unsuccessful. Space-shifting found to be "paradigmatic noncommercial personal use.")

<sup>103</sup> There is no case directly on point to this effect, but it seems to be an inexorable conclusion based on the Supreme Court's holding in *Sony* that time-shifting broadcast television is a fair use, *Sony*, 464 U.S. at 423; the dicta of the Ninth Circuit in *A&M Records v. Napster, Inc.*, 239 F.3d 1004, 1019 (9th Cir. 2001) and *Recording Indus. Ass'n of Am. v. Diamond Multimedia Sys., Inc.*, 180 F.3d 1072 (9th Cir. 1999).

infringement. As illustrated, the operation of the fair use doctrine reduces the scope of the recording industry's copyrights and decentralizes decision making power in relation to new technologies in ways that can promote social welfare.

For the reasons given above, market optimism appears to be questionable in some contexts, but there is also a large degree of efficient private ordering that cannot be simply ignored. We should expect private ordering through licensing and the formation of firms to significantly reduce the negative welfare consequences of increasing copyright scope, but only up to a point. Figure 2 shows the welfare effects of copyright scope as initially depicted in Figure 1 (represented as a dashed line) but revised to take account of the mitigating effects of private ordering that is somewhat, but not perfectly efficient (represented by the solid line). As illustrated, if we reject a strong version of market optimism, the negative effects of an increase in copyright scope can be mitigated by private ordering, but not entirely erased. At the extreme level of copyright scope ( $S_{\infty}$ ), the welfare effect of copyright falls to zero. In this bleak and purely hypothetical scenario: there is no fair use, all ideas are subject to copyright, and even the makers of typewriters are liable for contributing to or inducing copyright infringement. Obviously,  $S_{\infty}$  does not represent any level of copyright scope that is likely to occur, even if copyright was rewritten according to the desires of copyright interests such as the entertainment industry.

**Figure 2. The welfare effects of copyright scope given private ordering**

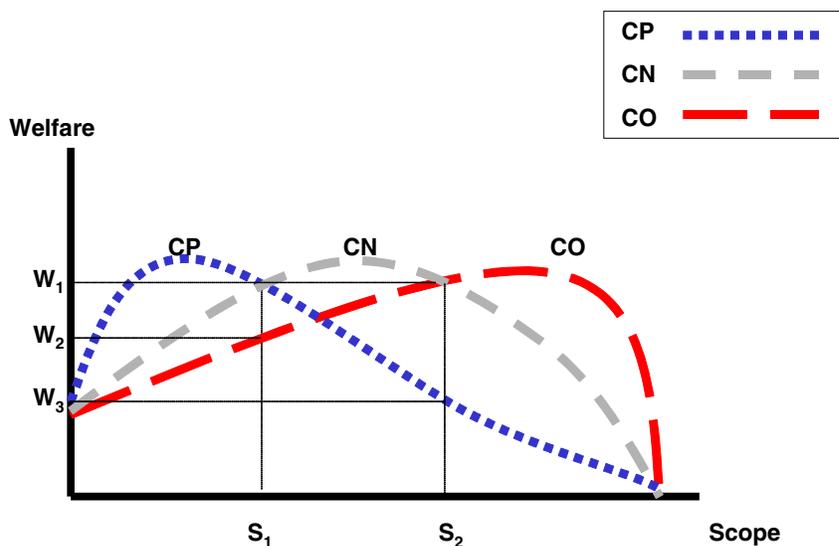
As Figure 2 illustrates, private ordering through both the market and the firm increases the level of copyright scope at which welfare is maximized (from  $S^*$  to  $S'$ ), but it does not change the fundamental relationship between copyright scope and welfare. The curve depicting the relationship is still convex; there is still a point,  $S^{**}$ , at which any increase in copyright scope will reduce welfare below its maximum,  $W'$ .

### Stage 3: Recognizing indeterminacy

None of this answers the question of whether the current level of copyright scope is more or less than  $S'$ . Empirical research on the efficiency of licensing and the consolidation of information production into firms has the potential to shed some light on this question, but it is unlikely to ever be conclusive. Different views of the benefits or detriments of a further extension of copyright scope can be attributed either to different assessments of the relationship between copyright scope and welfare, or merely to

different assessments of the status quo, or different views regarding the effectiveness of market reallocation. A copyright pessimist is likely to view the relationship as positively skewed, such that most of the benefits of copyright protection come from fairly low levels of protection. In contrast, a copyright optimist is likely to view the relationship as negatively skewed, such that it is not until copyright scope is very broad that the maximum benefits of copyright are seen. Figure 3 illustrates three possible relationships between welfare and copyright scope, drawn from the perspectives ranging from less to more optimistic (pessimist (CP), neutral (CN) and optimist (CO)).

**Figure 3. Multiple possible relationships**



Consider the move from  $S_1$  to  $S_2$ , where  $S_1$  represents the current level of copyright scope and  $S_2$  represents a proposed increase. The shift from  $S_1$  to  $S_2$  is welfare negative on the CP curve because welfare declines from  $W_1$  to  $W_3$ . On the CN curve, the shift from  $S_1$  to  $S_2$  is welfare neutral, although a move from  $S_1$  to any point between  $S_1$

and  $S_2$  would be welfare enhancing. On the CO curve, the shift from  $S_1$  to  $S_2$  is welfare improving because welfare increases from  $W_2$  to  $W_1$ .

The three curves in Figure 3 represent three different sets of assumptions about the relationship between copyright scope and welfare and varying degrees of optimism about the effect of an increase in copyright scope. However, they could equally represent the varying effects of copyright across three different industries. Returning to the earlier example of the *Bridgeport* decision, a blanket prohibition on unlicensed digital sampling is likely to modestly increase the incentives for music production in general, but it would also significantly raise the costs of producing certain types of music, such as hip-hop. Alternatively, it may be the case that folk musicians with a tradition of reinterpreting past works have lower fixed costs, require lower monetary rewards, but experience higher intrinsic rewards from production than pop singers in the mold of Britney Spears. Given those assumptions, folk singers would be best served by fairly low levels of copyright scope and are potentially adversely affected by even small increases in costs and uncertainty associated with higher levels of scope.

This leads to another significant consideration: even if it is established that an increase in copyright scope would do more harm than good in one industry, we have no present basis on which to generalize that finding to other industries.<sup>104</sup> In Figure 3 if we view CO, CN and CP, not as different views of the scope-welfare relationship in a given market, but rather as the scope-welfare relationship in three different markets, it is clear that increasing copyright scope might simultaneously increase welfare in relation to one sector of the economy, while reducing it in another.

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<sup>104</sup> Dan Burk and Mark Lemley discuss a similar problem with respect to industry variation in patent law. Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1578 (2003) (finding that economic evidence, patent doctrine, and legal theory, all vary by industry).

### C. Doctrinal Efficiency

Existing scholarship questioning the scope of tends to focus on either the public good nature of information or the positive externalities which result from information production.<sup>105</sup> In contrast, this article highlights the relationship between copyright scope and doctrinal efficiency. As noted in the introduction, much of the existing copyright literature is devoted to illustrating the potential excesses of copyright and proposing various doctrinal levers to remedy those excesses.<sup>106</sup> Understanding the relationship between copyright scope and welfare is an important part of those endeavors, but it is not complete without an appreciation of doctrinal efficiency.

In evaluating specific doctrinal recommendations, we need to assess both the effect on copyright scope in general and the specific costs and benefits of the doctrinal formulation in particular. From this perspective, it is simplistic to assume that all possible compositions of copyright scope have the same effect on the author's expected reward, the author's cost of expression and the administrative costs of the copyright system.<sup>107</sup> As discussed in the previous section, the traditional economic analysis of copyright can be usefully reframed as an inquiry into the optimum level of copyright scope, as opposed to copyright protection (which includes both scope and duration). Although focusing on scope is in many ways an improvement on the traditional model, it remains compositionally indeterminate. Just as copyright protection is composed of both scope and duration; copyright scope itself represents the combined effects of numerous copyright doctrines: the idea-expression distinction, the test of substantial similarity, the

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<sup>105</sup> See Part II.C, *supra*.

<sup>106</sup> See, *supra* note 8 and accompanying text.

<sup>107</sup> This simplifying assumption is perfectly reasonable in the context of Landes and Posner's original work which focused on the economic efficiency of the copyright system as a whole. See Landes & Posner, *supra* note 35, at 325.

fair use doctrine, secondary liability, and anti-circumvention liability under the DMCA.<sup>108</sup> Consequently, any assessment of the optimum level of scope will also be doctrinally indeterminate, as it too could be achieved through a theoretically infinite number of combinations of its various components.<sup>109</sup>

The compositional indeterminacy of copyright scope means that economic analysis of copyright doctrines must consider both the optimal level of copyright scope and the efficiency of individual doctrines. Even if one regards economic efficiency as the sole motivation for copyright doctrines,<sup>110</sup> it is nonetheless apparent that copyright doctrines are only approximations for the efficiency concerns embedded within the law. Furthermore, the flexibility of individual doctrines is limited by the need to establish tests that are capable of observation and prediction by the public and application by the courts.

There is no easy solution to interdependence of optimum copyright scope and optimum doctrinal composition, but it is clear that some comparison of doctrinal efficiency effects with the possible welfare gains of changing the level of copyright scope is necessary. One measure of the efficiency of individual doctrines is the disparity between the positive incentive effects of marginal increases in copyright scope and the associated increased costs to potential second generation authors. Put simply, the efficiency of an individual copyright doctrine is determined by the extent that a change in scope it benefits first generation authors more than its costs second generation authors for a given level of copyright scope.

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<sup>108</sup> See notes 41 to 45 and accompanying text.

<sup>109</sup> Landes and Posner hint at the problem of compositional indeterminacy, but they do not pursue its conclusions beyond noting that “[t]he more the cost of expression rises as [Z] increases... the lower will be the optimal degree of copyright protection.” Landes & Posner, *supra* note 35, at 344.

<sup>110</sup> For a contrary point of view see, Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287 (1988). See also Molly Shaffer Van Houweling, *Distributive Values in Copyright*, 83 TEX. L. REV. 1535 (2005).

The abstract scope/welfare curves in the previous sections are all drawn assuming that any given level of scope is achieved in the most efficient way possible, i.e. with the least costly combination of doctrinal settings. That assumption is useful for developing intuitions about the relationship between copyright scope and welfare in general, but it must be abandoned to evaluate the logic of particular doctrinal questions.

Again, the Supreme Court's recent decision in *Grokster* illustrates the importance of doctrinal efficiency. In that case, the representatives of the copyright owners and their supporting *amici* argued that the practical scope of copyright protection for sound recordings had been reduced by widespread unauthorized peer-to-peer file sharing. Assuming that much is true, it is nonetheless debatable whether society as a whole would be better off with an expansion of the copyright owners' formal legal rights, and more importantly which form of expansion would be most desirable.

In *Grokster*, the entertainment industry urged the Court compare the ratio of infringing and non-infringing uses of a product or service and hold that "a defendant should be liable whenever infringement is the principal or primary use."<sup>111</sup> Lawyers for the entertainment industry argued that "where the primary use is infringement, the defendant is fairly said to be in the business of infringement, not substantially unrelated commerce. Holding the purveyor of such an infringement-driven service responsible forces that business to internalize the costs of infringement and is consistent with traditional tort and copyright principles placing liability on gatekeepers who can most effectively stop infringement."<sup>112</sup>

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<sup>111</sup> MGM Studios Inc. v. Grokster, Ltd., Reply Brief For Motion Picture Studio And Recording Company Petitioners, 2004 U.S. Briefs 480, 8 (U.S. S. Ct. Briefs 2005)

<sup>112</sup> *Id.*

In a similar vein, several amicus briefs urged the Court to adopt a narrow reading of its earlier decision in *Sony* and apply a comprehensive balancing test of the relative harms and benefits associated with dual-use technologies to delineate the boundaries of secondary liability.<sup>113</sup> The Menell Amicus Brief proposes an eight factor that courts should consider in this regard: (1) the knowledge possessed by the defendants about infringing use; (2) the extent to which aspects of the product or service were designed purposefully and without functional advantages to evade liability; (3) whether non-infringing uses can be achieved for most consumers through other means without significant added expense, inconvenience, or loss of functionality; (4) the extent to which copyright owners can protect themselves against such infringements without undue cost (e.g., through self-help mechanisms such as encryption); (5) the extent to which infringement affects only a limited number of works; (6) the cost and efficacy of enforcement against direct infringers; (7) the extent to which the plaintiffs seek to expand unduly the scope of their copyrights for purposes of controlling new markets, as opposed to protecting their copyrighted works (copyright misuse); and (8) the impacts of potential remedies on both infringing and non-infringing uses.<sup>114</sup>

The Arrow Brief demonstrates a similar enthusiasm for judicially administrated balancing tests. Its primary concern is that the rules of secondary liability should give technology manufacturers the appropriate incentive to deter infringement “in instances where deterrence could be accomplished at low cost and without any significant

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<sup>113</sup> MGM Studios Inc. v. Grokster, Ltd., Brief of Amici Curie Peter S. Menell et al in Support of Petitioners, 2004 U.S. Briefs 480, 24 (U.S. S. Ct. Briefs 2005)

<sup>114</sup> *Id.* at 26 –28.

interference with non-infringing uses.”<sup>115</sup> Arrow and his fellow *amici* urged the Supreme Court to dismantle the *Sony* safe harbor of substantial non-infringing use. They argue that technology providers whose products have substantial non-infringing uses will have no incentive to make their products less harmful to copyright owners under that approach.<sup>116</sup>

The Arrow Brief urged the Court to consider both the good faith of the technology developers and the extent to which “reasonable modifications to the relevant technology could reduce the number of infringing acts without substantially interfering with non-infringing uses.”<sup>117</sup> Adding an even greater degree of judicial oversight, the *amici* also suggest that courts should consider whether the non-infringing uses of the technology could be achieved with existing or alternative technology.<sup>118</sup>

The various balancing tests proposed in relation to secondary liability create a vague and uncertain standard that amounts to an open-ended duty to modify product design. The costs of this uncertain approach are likely to be significant in the context of technology development because inventors and entrepreneurs in the present day have no way of knowing what a court will make of their infringement mitigation attempts by the time their case goes to trial. Courts face substantial information costs in second guessing complex engineering and business decisions. Consequently technology developers need to factor in not only their own uncertainties but also the significant likelihood of judicial error. This is a perilous climate for investment in innovation.

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<sup>115</sup> *MGM Studios Inc. v. Grokster, Ltd.*, Brief of Amici Curiae Kenneth J. Arrow et al in Support Of Petitioners, 2004 U.S. Briefs 480, 3 (U.S. S. Ct. Briefs 2005).

<sup>116</sup> *Id.* at 9.

<sup>117</sup> *Id.* at 10 11. (Arguing that firms responsible for promulgating peer-to-peer technology should undertake good faith efforts toward identifying and implementing plausible low-cost mechanisms that might discourage infringement.)

<sup>118</sup> *Id.* at 13.

Furthermore, by urging courts to consider complex factual questions relating to the technology developer's good faith and the reasonableness of modifications, the balancing tests proposed above open the door wide ranging discovery and protracted litigation. The strategic use of litigation facilitated by standards that do not lend themselves to summary judgment would cast an even darker shadow over the garages and boardrooms of Silicon Valley.<sup>119</sup> A balancing test for secondary liability is only efficient in an abstract world of perfect and swift adjudication. In the real world it has little to commend it. More importantly, as the Supreme Court recognized, adopting an open-ended duty to modify product design was not the only way to expand the scope of copyright in relation to file sharing. Rather than modifying *Sony's* protection for dual-use technology, the Court increased the protection of the entertainment industry by applying the doctrine of "inducing infringement" to the facts at issue.

In *Grokster*, the Supreme Court unanimously concluded that:

one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.<sup>120</sup>

The Court found that there was "unmistakable evidence" that the defendants had taken active steps to induce copyright infringement on their network – based primarily on the defendants' aim to satisfy a known source of demand for copyright infringement (former Napster users).<sup>121</sup>

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<sup>119</sup> See, *MGM Studios Inc. v. Grokster, Ltd.*, 125 S. Ct. 2764, 2792-2793 (U.S. 2005) (Warning that requiring defendants to provide detailed evidence would "increase the legal uncertainty that surrounds the creation or development of a new technology capable of being put to infringing uses. Inventors and entrepreneurs (in the garage, the dorm room, the corporate lab, or the boardroom) would have to fear (and in many cases endure) costly and extensive trials when they create, produce, or distribute the sort of information technology that can be used for copyright infringement.)

<sup>120</sup> *Id.* at 2770.

<sup>121</sup> For example, Streamcast had promoted itself as the "#1 alternative to Napster" and enticed former Napster users with messages such as "Napster Inc. has announced that it will soon begin charging

The Court reinforced its conclusion by pointing to the defendants' failure to attempt to develop filtering tools or other mechanisms to diminish the infringing activity using their software and the significance of infringing activity to sustaining their respective business models.<sup>122</sup> But it is important to note that "in the absence of other evidence of intent, a court would be unable to find contributory infringement liability merely based on a failure to take affirmative steps to prevent infringement, if the device otherwise was capable of substantial noninfringing uses."<sup>123</sup> Furthermore, the Court cautioned that the evidence of a link between infringing uses and profitability alone would not "justify an inference of unlawful intent," but that "viewed in the context of the entire record its import [was] clear."<sup>124</sup>

The inducing infringement doctrine may not possess the same abstract potential for optimization as the balancing tests advocated by the entertainment industry and its supporting amici. However, it is not encumbered by its many drawbacks either. Inducing infringement makes technology developers liable for "affirmative steps" and "clear expression" that fosters third party copyright infringement. Technology developers who are careful to stress the appropriate uses of their products and who meet the threshold of substantial non-infringing use are left free to make their own design choices without fear of interference by copyright owners or second guessing by the courts.

In sum, As *Grokster* illustrates, individual doctrinal questions can only be determined by considering both copyright scope and comparative doctrinal efficiency.

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you a fee. That's if the courts don't order it shut down first. What will you do to get around it?" *Id.* at 2773. *Grokster's* intention was manifest in the derivation of its names (a weak argument) and its practice of encoding its web site with meta-tags "Napster" and "free filesharing." *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.* at 2781, n.12.

<sup>124</sup> *Id.* at 2782.

Expecting judges to precisely calibrate copyright scope is unrealistic in most cases, in contrast, the experience of judges administering the common law is likely to give them at least a broad intuitive grasp of the trade-offs involved in assessing doctrinal efficiency.

The foregoing analysis also indicates that improving doctrinal efficiency *without* reference to optimum copyright scope may be justified in some cases. *If* the resulting changes in scope are thought to be small, the welfare benefits of improving doctrinal efficiency will probably exceed the possible costs of moving scope in the wrong direction. For example, the application of the fair use doctrine could be greatly improved through a codification of certain safe-harbors already recognized in the common law. Doctrinal rules are least efficient when they increase transaction costs and uncertainty, or where they impede market solutions. Mitigating this inefficiency is a feasible use of law and economics, probably more feasible than finding the optimal level of copyright protection or even the optimal level of copyright scope.

#### **D. Applying the Copyright Scope and Doctrinal Efficiency Framework**

The forgoing discussion can be reduced to four conclusions, three of which in turn provide useful metrics to assess a variety of specific doctrinal recommendations in copyright law. First, it can be said with a high degree of confidence that a level of copyright scope that approaches either zero or infinity will be sub-optimal.<sup>125</sup> By itself this does not serve as a useful benchmark, but it is an important foundational point. The normative implications of this conclusion depend on one's own assessment of where the current scope of copyright lies along that spectrum. The current scope of copyright is

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<sup>125</sup> Clearly, this is by no means the first article on copyright to reach this conclusion, nor is it likely to be the last. *See, e.g.*, Lessig, *Intellectual Property and Code*, *supra* note 5, at 638; Cohen, *supra* note 5, at 514.

clearly less than  $S_{\infty}$ , but whether it is more or less than the optimum remains an open question. In formal terms copyright scope today is undoubtedly high compared to any other period of history.<sup>126</sup> But in practical terms, the effective scope of copyright may be at an all time low because of the digitization of content and advances in copying technology.<sup>127</sup>

The second conclusion is that the net welfare effects of a change in copyright scope are dependant on the efficiency of private ordering. The more efficiently the market reallocates rights through licensing or the consolidation of production into firms, the higher the optimum level of copyright scope will be. If the scope-welfare function is convex, not only is the efficiency of private ordering likely to vary generally, but the degree of efficiency required to justify an increase in copyright scope on welfare grounds increases with the level of copyright scope. Thus the higher the existing level of copyright scope is, the more efficient private ordering must be to sustain yet further increases.

The third conclusion is that the compositional indeterminacy of copyright scope (and copyright protection more generally) means that economic analysis of copyright doctrines must consider both the optimal level of copyright scope and the effect of *different doctrinal compositions* of copyright scope. Doctrinal recommendations that focus on optimizing the scope of copyright in the abstract but do not account for the effect of a proposed doctrinal change on transaction costs, uncertainty or strategic behavior are necessarily incomplete.

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<sup>126</sup> LESSIG, FREE CULTURE, *supra* note 1, at 7-8, 141-44.

<sup>127</sup> Landes & Posner, *supra* note 35, at 84. But note that copyright scope has also increased because of the same technological forces. In particular because the use of a copyrighted digital work also necessitates copying that work into a computer's random access memory. See, MAI Sys. Corp. v. Peak Computer, 991 F.2d 511, 518 (9th Cir. 1993).

The fourth conclusion that can be drawn from the forgoing models of the welfare effects of copyright scope is that determining the net welfare effects of any given change in copyright doctrine is extremely difficult. Even if a cost-benefit analysis of the welfare effects of a change in copyright scope with respect to one particular group was clear, the net welfare effect across all affected groups remains uncertain. It would be difficult to say prospectively whether a change in the law that made Hollywood blockbusters less profitable but expanded the freedom of independent film makers was a net positive, especially because each provides the infrastructure for the other in some fashion. Empirical evidence of the effect of changes in copyright scope has the potential to further clarify the nature of the welfare-scope relationship, but subject to both *inter-* and *intra-* industry variation.

The welfare-scope relationship is both complicated and subject to substantial variation, both within and between industries. Doctrinal recommendations which simply assume that the welfare effects of a change in copyright scope are easily ascertainable are likely to be far too simplistic. Even where data is available, it will be open to competing explanations and extrapolations. Furthermore, advocates of industry focused tailoring solutions must consider whether intra-industry variation might not be just as significant as the inter-industry variation they seek to design policy around.

In summary, the insights offered by the analysis of copyright scope and doctrinal efficiency in this article go well beyond the mere assertion that infinite copyright is undesirable (although that is an important starting point). In particular, the forgoing analysis has established that:

- (1) The efficiency of private ordering is the key determinant of the ideal level of copyright scope.
- (2) The welfare-scope relationship is both complicated and subject to substantial variation, both within and between industries.
- (3) Doctrinal recommendations that focus on optimizing the scope of copyright in the abstract but do not account for the effect of a doctrinal change on transaction costs or uncertainty are necessarily incomplete.

Using these conclusions as metrics for assessing doctrinal proposals makes the transition from abstract economics to practical application possible. Part III which follows demonstrates the application of these metrics in the context of a critical evaluation of the primary law and economics approaches to copyright's fair use doctrine.

### PART III – APPLICATION TO FAIR USE

This part builds on the framework developed in Part II by assessing the predominant law and economics approaches to copyright's fair use doctrine in light of the conclusions reached in relation to copyright scope and doctrinal efficiency. The conclusions from the previous part can be restated as metrics or benchmarks for analyzing a doctrinal theory as follows:<sup>128</sup>

- (1) Does the theory take account of the role of private ordering in determining the ideal scope of copyright?
- (2) Is the theory doctrinally efficient?
- (3) Is the theory feasible in light of the expectation that there will be substantial variation, both within and between industries, in the welfare-scope relationship?

By applying these metrics for assessing doctrinal proposals, this article illustrates how the gap between the traditional law and economics of copyright and specific doctrinal analysis can be bridged. The development and application of these metrics does not definitively determine which doctrinal proposals are either efficient or normatively desirable, but it makes a contribution by filtering out some ill-conceived recommendations, and by identifying areas for improvement in others. The analysis that follows is devoted to the traditionally “troublesome” doctrine of fair use,<sup>129</sup> but the metrics developed in this article can be applied to wide range of doctrinal recommendations in copyright.

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<sup>128</sup> The metrics have been reordered to suit the application that follows.

<sup>129</sup> See *Dellar v. Samuel Goldwyn, Inc.*, 104 F.2d 661, 662 (2nd Cir. 1939).

The two primary law and economics contributions to the fair use doctrine, the market failure test and the application of a cost-benefit analysis present a puzzling contradiction. Resting on an initial presumption of efficient private ordering, the market failure approach places a heavy burden on defendants to establish fair use.<sup>130</sup> In contrast, the cost-benefit approach manifests a deep pessimism in the capacity of market institutions to provide the kind of flexibility that the users of copyrighted works require, and tilts the scales heavily in favor of fair use.<sup>131</sup> These approaches share a common foundation in law and economics, and yet they reach very different conclusions as to how judges should apply the fair use doctrine.

Part III.A. outlines the basic features of both the market failure theory of fair use and the cost-benefit approach. Part III.B. explores the strengths and weaknesses of the market failure theory in relation to the three metrics of private ordering, doctrinal efficiency and variation. Part III.C. then undertakes the same analysis with respect to the cost-benefit approach to fair use. Finally, Part III.D. revisits both theories in light of this analysis and reviews the primary insights derived.

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<sup>130</sup> Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors*, 82 COLUM. L. REV. 1600 (1982) [hereinafter, Gordon, *Fair Use as Market Failure*]. Gordon proposed a three part test as follows: “Fair use should be awarded to the defendant in a copyright infringement action when (1) market failure is present; (2) transfer of the use to defendant is socially desirable; and (3) an award of fair use would not cause substantial injury to the incentives of the plaintiff copyright owner.” *Id.* at 1614.

<sup>131</sup> Variations of a cost-benefit analysis of fair use have been proposed by a number of scholars, most comprehensively by William Fisher and Glynn Lunney. See William W. Fisher III, *Reconstructing The Fair Use Doctrine*, 101 HARV. L. REV. 1661 (1988); Glynn S. Lunney, *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975 (2002). See *infra* part III.C.

## A. Law and Economics Theories of Fair Use

### 1. Fair Use as Market Failure

Since it was first articulated by Wendy Gordon over twenty years ago,<sup>132</sup> the concept of *fair use as market failure* has been controversial,<sup>133</sup> and arguably misunderstood.<sup>134</sup> Nonetheless its influence is undeniable.<sup>135</sup> The essential logic of the fair use as market failure paradigm is that strong property rights facilitate an efficient market in the exploitation of creative works, but that on occasions where that market fails, exceptions to strong property rights in the form of fair use have to be made.<sup>136</sup>

Applications of Gordon's market failure framework have largely concentrated on the role of transaction costs in justifying fair use.<sup>137</sup> However, it is important to note at the outset that Gordon's initial formulation also addressed other potential causes of market failure, including externalities and "non-economic motivations."<sup>138</sup> Gordon's original test for applying fair use required the defendant to establish three things: (1) the

<sup>132</sup> Gordon, *Fair Use as Market Failure*, *supra* note 130, at 1653-54.

<sup>133</sup> See for example: Raymond Shih Ray Ku, *Consumers and Creative Destruction: Fair Use Beyond Market Failure*, 18 BERKELEY TECH. L. J. 539 (2003); Lunney, *supra* note 131; Robert P. Merges, *The End of Friction? Property Rights and Contract in the "Newtonian" World of On-Line Commerce*, 12 BERKELEY TECH. L.J. 115, 130-34 (1997); and Lydia Pallas Loren, *Redefining The Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1 (1997).

<sup>134</sup> According to Gordon herself. See Gordon, *Market Failure and Intellectual Property: A Response To Professor Lunney*. 82 B.U. L. REV. 1031 [hereinafter, Gordon, *Market Failure and Intellectual Property*]. See also Merges, *supra* note 133, at 130.

<sup>135</sup> Gordon's *Fair Use as Market Failure* has been cited with approval by the Supreme Court in *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 478 (1984) (Blackmun, J., dissenting); *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 559 (1985) (O'Connor, J., per curiam); and by the Second Circuit in *Leibovitz v. Paramount Pictures Corp.*, 137 F.3d 109, 115 (2d Cir. 1998); by the Seventh Circuit in *Ty, Inc. v. Publ'ns Int'l*, 292 F.3d 512, 517 (7th Cir. 2002); by the Ninth Circuit in *Fisher v. Dees*, 794 F.2d 432 (9th Cir. 1986) and *Worldwide Church of God v. Philadelphia Church of God, Inc.*, 227 F.3d 1110, 1119 (9th Cir. 2000); In addition, Gordon's *Fair Use as Market Failure* was clearly influential in the Second Circuit's decision in *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913 (2d Cir. 1994).

<sup>136</sup> See Robert P. Merges, *Are You Making Fun of Me? Notes on Market Failure and the Parody Defense in Copyright*, 21 AM. INTELL. PROP. L. ASS'N Q.J. 305, 307 (1993) (noting that deviations from a presumption against fair use "must be pleaded with special facts, and convincingly").

<sup>137</sup> The term 'transaction cost' broadly refers to any cost incurred in relation to an economic exchange. See Tirole, *supra* note 48, at 29.

<sup>138</sup> Gordon, *Fair Use as Market Failure*, *supra* note 130.

presence of market failure; (2) the social desirability of allowing the defendant's unauthorized use to continue; and (3) that finding fair use would not cause substantial injury to the incentives of the copyright owner.<sup>139</sup>

There have been many attempts to apply fair use as market failure to extrapolate an efficient application of the fair use doctrine in particular situations. For example, Landes and Posner reframe the fair use status of parody in terms of a failure in the market for permission to criticize in the form of a derivative work.<sup>140</sup> A failure of the market for permission to parody appears inevitable, since it would be unrealistic to expect authors to voluntarily allow themselves to be criticized.<sup>141</sup> Although this is a convincing explanation, it fails to identify exactly *why* the author's subjective value in not being ridiculed should not be fully represented.<sup>142</sup> As Alfred Yen argues, the idea that parody represents a market failure rests on a value judgment that the author's anti-dissemination motives should be given less respect than other preferences.<sup>143</sup> As a matter of copyright doctrine, this is fairly easy to explain. Copyright does not exist for the benefit of individual authors, but rather for the promotion of the progress of science and the useful arts.<sup>144</sup> Given that rationale, a bias towards dissemination seems obvious. But, from an abstract utility maximizing perspective, it is hard to see why we should not be completely

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<sup>139</sup> *Id.*, at 6014. Note that Gordon no longer holds to the third element of her proposed test. See Gordon, *Intellectual Property and Market Failure*, *supra* note 134, at 1034-35.

<sup>140</sup> Landes & Posner, *supra* note 35, at 359-60.

<sup>141</sup> As the Supreme Court notes in *Campbell*, "People ask for criticism, but they only want praise." *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 592 (1994) (quoting from S. Maugham, *Of Human Bondage* 241 (Penguin ed. 1992)).

<sup>142</sup> See, Alfred C. Yen, *When Authors Won't Sell: Parody, Fair Use and Efficiency in Copyright Law*, 62 U. COLO. L. REV. 79 (1991).

<sup>143</sup> *Id.*

<sup>144</sup> U.S. Const. Art 8.

neutral about an author's desire to suppress information. In which case, anti-dissemination motives are not a source of market failure.<sup>145</sup>

Landes and Posner also regard quotation and reference in the service of review and criticism more generally as justified under a market failure approach.<sup>146</sup> The authors argue that if reviews depended on consent, they would lose credibility with the public and therefore be less valuable to both authors and the public.<sup>147</sup> Consequently, the benefits of a no-consent rule to authors as a class outweigh the individual interests of those authors who get bad reviews. From a game theory perspective, this can be framed as a simple coordination problem. However, applying the logic of Merges' *Contracting Into Liability Rules* to the problem of reviews,<sup>148</sup> one might ask why we should not simply rely on the emergence of market mechanisms to overcome such problems. If authors as a class really benefit from reviews, they should find some contractual mechanism to enable them to pre-commit to allowing reviews.<sup>149</sup>

Furthermore, in response to the recent extension of copyright duration by the CTEA,<sup>150</sup> a number of authors have suggested that courts should adjust the scope of copyright protection to account for the passage of time by expressly considering time as a factor in fair use analysis.<sup>151</sup> Joseph Liu argues that as a work becomes older, the ability of the author to prevent re-use, criticism, transformation, and adaptation of that work should diminish, i.e. "fair use should be greater for Mickey Mouse than for Harry

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<sup>145</sup> Yen, *supra* note 142, at 79.

<sup>146</sup> Landes & Posner, *supra* note 35, at 358.

<sup>147</sup> *Id.* at 359.

<sup>148</sup> See *supra* note 87 and accompanying text.

<sup>149</sup> Reasons why this may not be the case are addressed below, see *infra* note 185 and accompanying text.

<sup>150</sup> See *supra* note 71 and accompanying text.

<sup>151</sup> Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409 (2002).

Potter.”<sup>152</sup> Richard Posner and William Patry present a proposal that is similar, but more clearly framed within the market failure paradigm. They suggest that the problem of obtaining licenses to reproduce old works of limited commercial value also merits fair use.<sup>153</sup>

## 2. A Cost-Benefit Approach to Fair Use

In the course of his epic reconstruction of the fair use doctrine, William Fisher proposes an altogether different law and economics based approach to resolving fair use cases. Fisher suggests that fair use cases should be determined through a detailed examination of the costs and benefits of the incentives and impositions resulting from competing uses of any given work.<sup>154</sup> The “cost” of allowing fair use is the notional reduction in the copyright owner’s incentives compared to what they might have been, had fair use not been allowed. The copyright owner’s potential incentives in this calculation include any licensing revenue she could have extracted from the defendant or any similarly situated persons.<sup>155</sup> The “benefit” of allowing fair use is that the defendant is neither denied the use of the work, nor is she forced to pay the copyright owner for that use. Again, this includes not just the actual defendant, but also all similarly situated potential defendants.<sup>156</sup>

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<sup>152</sup> *Id.* at 410. See also Justin Hughes, *Fair Use Across Time*, 50 UCLA L. REV. 775 (2003) (stating that fewer unauthorized uses should be fair uses in the first years or decades of a copyright term, and more and more unauthorized uses should be deemed fair as a work grows older).

<sup>153</sup> Richard Posner & William Patry, *Fair Use and Statutory Reform in the Wake of Eldred*, 92 CAL. L. REV. 1639 (2004).

<sup>154</sup> Fisher, *supra* note 131. A cost-benefit analysis is also the second limb of Gordon’s test, once the initial screen of market failure has been satisfied. Although Gordon’s formulation is slightly different, in that she would determine whether allowing fair use was socially beneficial by asking whether “when the “market failure” were cured, the price that the owner would demand is lower than the price that the user would offer.” Gordon, *Fair Use as Market Failure*, *supra* note 130, at 1614.

<sup>155</sup> Fisher, *supra* note 131, at 1699.

<sup>156</sup> *Id.*

The idea of resolving fair use decisions through a cost-benefit analysis is simple to state, but difficult to apply. Under Fisher’s approach, a judge would have to catalog every conceivable type of use of a work, ranging from reprints to action figures and beyond, then to determine the value of each potential use, rank them, and weigh them against the range of costs to the current and other future possible defendants.<sup>157</sup>

Glynn Lunney offers another version of a cost benefit analysis for fair use.<sup>158</sup> Lunney urges courts to regard the four statutory factors as historically dated “proxies for the balance of competing public interests” and adopt a more general cost-benefit approach to the fair use.<sup>159</sup> Similar to Fisher, Lunney argues that, “[i]n an ideal world with perfect information, courts could resolve the fair use issue by determining precisely the social value of additional authorship resulting from prohibiting a use and then comparing that value to the social value of allowing the use to continue.”<sup>160</sup> What is striking about this formulation is that it suggests that the ideal resolution of fair use cases rests literally on a case-by-case analysis. Whether this is what Lunney actually intended, or merely a paradigmatic extrapolation, is unclear. Accordingly, the application of the metrics that follows considers a cost-benefit analysis applied on a purely case by case level, a highly specified level that required a new cost-benefit analysis for all but the narrowest of factual classes, and a cost-benefit analysis applied at a much broader industry level.

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<sup>157</sup> *Id.*

<sup>158</sup> Lunney, *supra* note 131, at 1023.

<sup>159</sup> *Id.* at 998.

<sup>160</sup> *Id.*

## B. Applying the Doctrinal Metrics to the Market Failure Theory

### 1. The Efficiency of Private Ordering

The first test of any law and economics based doctrinal recommendation should be whether it takes account of the relationship between the ideal level of copyright scope and the efficiency of private ordering. *Prima facie*, the market failure approach to fair use would seem to pass this test with flying colors, but a more detailed analysis suggests some grounds for qualification. Although the market failure test for fair use is appropriately focused on the central question of whether the market is working or not, the mechanics of the test are loaded significantly in favor of false positives, i.e., of concluding that the market is working when in fact it is not.<sup>161</sup> In particular, the requirement that the defendant prove the existence of market failure as a prerequisite for a finding of fair use<sup>162</sup> tilts this apparently neutral framework decidedly in favor of the copyright owner.

The allocation of the burden of proof in fair use cases is extremely important because of the difficulty of actually proving that a market is or is not working. The Supreme Court's *Sony* decision illustrates an evidentiary stalemate typical of fair cases: the movie studios were unable to establish that time-shifting actually resulted in an adverse market effect, but nor could Sony establish that such an effect would not occur in the future.<sup>163</sup> Ultimately, the case turned on the majority's presumption that non-commercial uses were fair uses.<sup>164</sup> Transaction costs, externalities and "non-market

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<sup>161</sup> See Wu, *supra* note 36 on the distinction between Type I and Type II errors and their comparative desirability.

<sup>162</sup> Gordon, *Fair Use as Market Failure*, *supra* note 130, at 1614.

<sup>163</sup> *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 424 (1984).

<sup>164</sup> *Id.* at 449 ("If the Betamax were used to make copies for a commercial or profit-making purpose, such use would presumptively be unfair. The contrary presumption is appropriate here, however, because the District Court's findings plainly establish that time-shifting for private home use must be characterized as a noncommercial, nonprofit activity.").

motivations” are always present to some degree in real world markets. Consequently, merely identifying the existence of one or more potential causes of market failure will never be sufficient; the defendant (or the plaintiff) must establish that these market imperfections are of a sufficient degree to constitute a market failure.

The presence of transaction costs that exceed the potential gains from trade between a copyright owner and a subsequent user is probably the most common rationalization for findings of fair use.<sup>165</sup> The term ‘transaction cost’ broadly refers to any cost incurred in relation to an economic exchange.<sup>166</sup> At a minimum, participants in the market for copyright permissions must (1) determine what permissions they require (2) locate all potential rights holders, and (3) negotiate with those rights holders over prices and terms. Additionally, there may also be costs to maintaining and enforcing agreements.<sup>167</sup> Transaction costs are significant because they may prevent otherwise efficient reallocation of rights from taking place.<sup>168</sup> For example, even though library users might be willing to pay a small price for permission to photocopy from text books and journal articles, they are probably unwilling to also bear the costs of contacting the relevant copyright owners and negotiating a license. If transaction costs exceed the potential gains from trade, the market will fail to allocate resources efficiently.<sup>169</sup>

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<sup>165</sup> Gordon, *Fair Use as Market Failure*, *supra* note 130.

<sup>166</sup> See, *supra* note 137.

<sup>167</sup> Gordon, *Fair Use as Market Failure*, *supra* note 130.

<sup>168</sup> *Id.* (When the transaction costs outweigh the net benefits that the parties would otherwise anticipate from a transfer, then the presence of the transaction costs may block an otherwise desirable shift in resource use.)

<sup>169</sup> Note that with respect to copyright, the potential gains from trade are normally equal to the user’s valuation of the right to make a copy, because the good in question is nonrivalrous. Consequently, where transaction costs are greater than a user’s valuation, the market will fail to allocate resources efficiently. In such cases, the would-be second user can either heed the exclusive rights of the copyright owner and forego the activity, or she can ignore those rights and reap the benefit of that use. Where transaction costs make licensing impossible, the copyright owner is neither benefited nor disadvantaged by unauthorized uses of a work; no matter what choice the would-be second user makes, the copyright owner gets nothing and loses nothing.

Although identifying potential sources of transaction costs is relatively easy, proving that they are, and will remain, so significant that the market has failed, is considerably more difficult. Indeed, a number of authors stress that exceptions to copyright based on transaction costs should be granted only sparingly.<sup>170</sup> As Rob Merges explains, one reason is that the presence of transaction costs creates an incentive for innovative market solutions that reduce transaction costs in the long term, without the disadvantages of judicial or government regulation.<sup>171</sup> Merges' analysis suggests that even the identification of apparent market failures in the short run does not merit limiting the scope of the copyright owner's rights because, in the long run, the market itself will address these problems.<sup>172</sup> A second reason often given as to why courts should not intervene in the face of transaction costs is that advances in technology may enable more efficient private ordering, by reducing transactional barriers and enabling copyright owners to control their works more effectively through the use of sophisticated permissions systems and digital rights management.<sup>173</sup> Some scholars have even predicted that these technological developments may obviate the need for the fair use doctrine entirely.<sup>174</sup> For both these reasons, transaction cost stories are easy to tell but hard to prove, thus elevating the significance of the market failure test's allocation of the burden of proof.

The allocation of the burden of proof onto the defendant is likely to be even more loaded against finding fair use where the defendant's case relies not on transaction costs,

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<sup>170</sup> Merges, *supra* note 87. See also Landes & Posner, *supra* note 35, at 358.

<sup>171</sup> Merges, *supra* note 87.

<sup>172</sup> See *id.*

<sup>173</sup> See Goldstein, *supra* note 2 **Error! Bookmark not defined.**, at 223-24. See Cohen, *supra* note 5, for an extensive discussion of this school of thought and its limitations.

<sup>174</sup> See, e.g., Bell, *supra* note 73.

but on less tangible causes of market failure such as externalities or non-economic motivations. There is a significant literature criticizing narrow applications of the market failure approach for their failure to account for externalities, which does not need to be repeated here.<sup>175</sup> The problem for a defendant seeking to prove market failure (or for a plaintiff seeking to disprove it) is that the market failure approach itself gives little guidance as to *what degree* of positive externalities or non-economic motivations might justify the application of fair use. For example, it might be true that billionaire industrialist Howard Hughes bought up all the copyrights in magazine stories chronicling his life in an attempt to suppress that information.<sup>176</sup> But without a mechanism to value Hughes' interests differently to his own subjective valuation (as measured by his willingness to pay, and presumed unwillingness to license), simply describing the copyright owner's motives as "non-economic" is not analytically useful by itself.<sup>177</sup>

Labeling someone as "irrational" does not amount to a systemic analysis of the efficiency of private ordering. From the perspective of law and economics, a better approach to assessing the efficiency of private ordering in such cases would be to rely on the insights of the literature on game theory or behavioral economics to identify scenarios where the market is likely to fail. Perhaps the most prominent application of game theory analysis in the intellectual property literature is Michael Heller's "anticommons theory."<sup>178</sup> Heller and Rebecca Eisenberg have suggested that unlike the familiar "tragedy

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<sup>175</sup> See, e.g., Loren, *supra* note 133; Lemley, *The Economics of Improvement*, *supra* note 5; and Cohen, *supra* note 5.

<sup>176</sup> Rosemont Enterprises, Inc. v. Random House, Inc., 366 F.2d 303, 311-12 (2d Cir. 1966).

<sup>177</sup> This is similar to Yen's point about parody. See Yen, *supra* note 142.

<sup>178</sup> Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621, 675 (1998). This is not actually an intellectual property piece but much of its subsequent application has been in intellectual property. See, e.g., Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCI. 698 (1998) (anticommons theory applied to patents on gene fragments and other biological materials).

of the commons” which leads to over-use of a scarce resource,<sup>179</sup> in some circumstances fragmented ownership of upstream rights can lead to an anticommons, the under-use of a valuable resource.<sup>180</sup> In the biotechnology context, Heller and Eisenberg argue that the availability of patents on gene fragments threatens to create an anticommons, thus stifling the process of drug discovery.<sup>181</sup> As the authors explain, the increasing patentability of gene fragments known as ESTs (expressed sequence tags),<sup>182</sup> means that any one downstream company seeking to develop a commercial end-product must negotiate with a multitude of upstream rights holders, any one of whom has the power to hold up the product.<sup>183</sup>

Ben Depoorter and Francesco Parisi have developed a price theory explanation of fair use which suggests that courts should take into account: (i) the number of copyright holders; (ii) the degree of complementarity between the copyrighted inputs; and (iii) the degree of independence between the various copyright holders.<sup>184</sup> Additional factors courts should also take into account include: (iv) the second generation author’s degree of uncertainty as to the value of any one input or the value of the final product; (v) the extent to which potential hold up problems would unduly deter second generation authors; and

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<sup>179</sup> See Garret Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968).

<sup>180</sup> Heller, *supra* note 178, at 624.

<sup>181</sup> Heller & Eisenberg, *supra* note 178 (stating that a proliferation of intellectual property rights upstream may be stifling life-saving innovations further downstream in the course of research and product development).

<sup>182</sup> An Expressed Sequence Tag is a tiny portion of an entire gene that can be used to help identify unknown genes and to map their positions within a genome. See National Center for Biotechnology Information, *A Basic Introduction to the Science Underlying NCBI Resources*, available at <http://www.ncbi.nlm.nih.gov/About/primer/est.html>.

<sup>183</sup> This is especially problematic in the context of royalty stacking and reach-through license provisions. See Robin C. Feldman, *The Insufficiency of Antitrust Analysis for Patent Misuse*, 55 HASTINGS L.J. 399, 442 (noting that NIH guidelines strongly discourage the use of Reach-Through Royalties).

<sup>184</sup> Ben Depoorter & Francesco Parisi, *Fair Use and Copyright Protection: A Price Theory Explanation*, 21 INT’L REV. L & ECON. 453 (2002) (concluding that “viewed in light of the anticommons theory, fair use doctrines retain a valid efficiency justification even in a zero transaction cost environment.”).

(vi) whether transactions are too heterogeneous to allow market based solutions to develop.

These factors can in turn be incorporated into the common law doctrine of fair use and provide a more discriminating basis for determining the allocation of the burden of establishing whether the market is working or not. Returning to the application of fair use to criticism, quotation and review, it seems unlikely that market driven opt-in mechanisms would develop given that authors, sensitivity to criticism, expectation of criticism and countervailing desire for publicity are all heterogeneous.<sup>185</sup>

In addition to considerations arising from game theory and behavioral economics, some of the recent literature on industrial organization and intellectual property may also identify situations in which the consequences of market failure will be most severe, and therefore where an over-inclusive fair use standard is preferable to an under-inclusive formulation.<sup>186</sup> As discussed in Part II.B., the fair use doctrine limits the scope of copyright so as to decentralize decision making in relation to technology development and allow for greater competition.<sup>187</sup>

In summary, the market failure approach to fair use does take account of the role of private ordering in determining the optimum scope of the copyright owner's rights. However, a more nuanced approach to determining whether it is the defendant or the plaintiff carries the burden in relation to market failure would improve the approach.

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<sup>185</sup> Another is that reviews uncompromised by the author's consent generate more significant positive externalities than reviews with permission.

<sup>186</sup> See Wu, *supra* note 36.

<sup>187</sup> See *supra* notes 100 to 103 and accompanying text.

## 2. Doctrinal efficiency

To the extent it effectively forecloses opportunities for the application of the fair use doctrine, the market failure test is appealing in terms of administrative efficiency. However, adopting the market failure test in its current form would constitute a significant expansion of copyright scope. Invariably requiring the defendant to establish market failure implicitly assumes that the copyright owner's rights are absolute and that any deviation from those rights requires substantial justification. This formulation does not sit well with either the text of the Copyright Act, or the case law applying the fair use doctrine. All of the copyright owner's exclusive rights under the Copyright Act are expressly qualified as "subject to" fair use.<sup>188</sup> Although the courts have been less than clear as to the exact procedural status of fair use,<sup>189</sup> the fact that, procedurally, fair use must be asserted as an affirmative defense,<sup>190</sup> does not mean that it is always the defendant who carries the burden of proof once the defense has been properly raised.<sup>191</sup>

In short, the market failure approach to fair use would be doctrinally efficient, but if applied in its current form it would also significantly expand the scope of copyright. As suggested above, the market failure approach would be improved if it was modified to include a more discriminating allocation of the burden of proof. Admittedly, modifying

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<sup>188</sup> See 17 U.S.C. § 106 (2005).

<sup>189</sup> Compare *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 449 (1984), with *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 590 (1994).

<sup>190</sup> *SunTrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1260 (11th Cir. 2001). See also *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1542 (11th Cir. 1996).

<sup>191</sup> The Supreme Court's *Sony* decision implies that the burden of establishing fair use shifts according to whether the defendant's use was "commercial" or "non-commercial." *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 449 (1984) ("If the Betamax were used to make copies for a commercial or profit-making purpose, such use would presumptively be unfair. The contrary presumption is appropriate here..."). See also *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 970 (9th Cir. 1992) ("Game Genie users are engaged in a non-profit activity. Their use of the Game Genie to create derivative works therefore is presumptively fair.")

this rather arbitrary feature of the test would reduce the efficiency of the doctrine to some degree, but trade would seem to be worthwhile.

### **3. Variation in the Scope-Welfare Relationship**

The third metric asks whether the recommended application is feasible in light of the expectation that there will be substantial variation, both within and between industries, in the welfare-scope relationship. Gordon's market failure test addresses this by calling for a cost-benefit analysis in the event that the defendant is able to establish market failure. This necessarily incorporates a case-by case cost-benefit analysis, and thus takes on all of the problems of that approach, as discussed in Part III.C., below.

However, there is no reason that a market failure approach must incorporate a cost-benefit analysis. The market failure approach accounts for variation in the efficiency of private ordering, which in turn is a significant determinant of variation in scope-welfare relationship generally. Once a court has determined that the relevant market should be presumed to have failed, or has been shown to have failed, a cost-benefit analysis seems unnecessary.

Consequently, viewed in its best light, the market failure approach to fair use addresses the variation in the scope-welfare relationship by focusing on a substantial cause of that variation – the efficiency of private ordering.

### **4. Overall Assessment of the Market Failure Theory**

The clear strength of the market failure approach to fair use is that it recognizes the centrality of the efficiency of private ordering and is responsive to variation in the efficiency of private ordering. The primary weakness of the market failure approach is its uniform allocation of the burden of proof with respect to the existence of market failure.

This feature both predisposes the test to false positives, and is inconsistent with the judicial application of the fair use doctrine.

In the final analysis, the market failure approach to fair use performs well when assessed against the metrics developed in this article, but the metrics also highlight ways in which the market failure test could be improved. Principally, the market failure approach to fair use should adopt a more discerning basis for allocating the burden of proof. One method of doing this is to apply some of the observations from game theory, behavioral economics and industrial organization to identify scenarios where the market is likely to fail, or scenarios in which the potential consequences of market failure justify a presumption that errs in favor of finding fair use.

### **C. Applying the Metrics to Cost-benefit Approach**

#### **1. The Efficiency of Private Ordering**

In contrast to the explicit focus of the market failure test, the cost benefit approach to fair use only considers the efficiency of private ordering by implication. The cost benefit approach presumes that courts can vary the application of copyright according to the author's need for copyright incentives. Given the high degree of judicial dexterity already assumed by the cost benefit approach, it seems reasonable to assume judges could also take into consideration the likelihood that rights will be effectively redistributed by the market.

In the ideal case, a judge with perfect information could exactly tailor the application of the fair use doctrine to maximize net social welfare, i.e. to find the optimal level of copyright scope. In reality, this is quite infeasible, but even if it was possible, the costs of such an exercise would overwhelm the benefits. In the alternative, the ability of a

judge to make the same kind of determination in a more generalized, industry-wide cost-benefit analysis is also questionable. This is because a test-case decision on the fairness of a particular use may be needed before copyright owners can be expected to establish workable market mechanisms. For example, one could argue that the Supreme Court's *Sony* decision was ill-advised because, if the Court had found time-shifting was not fair use, content producers and technology manufacturers would have inevitably negotiated some kind of compensation system to allow the technology to develop.<sup>192</sup> So, while the fact that a particular set of facts has resulted in litigation may itself indicate a specific failure of private ordering, that failure itself may have been the product of legal uncertainty rather than defective market structure.

In sum, the cost benefit approach to fair use fails to offer a plausible method to evaluate and or respond to the variation in the efficiency of private ordering.

## 2. Doctrinal Efficiency

The second metric by which law and economics doctrinal recommendations should be assessed relates to doctrinal efficiency. As discussed in Part II.C., any notional welfare gains alleged to result from an expansion of copyright scope must be offset against any welfare losses associated with the particular doctrinal change used to implement that change in scope. Failure to account for the high costs and speculative benefits of asking judges to fine tune the scope of copyright is the main defect of the paradigmatic cost benefit approach to fair use.

Although both Fisher and Lunney are somewhat vague about the level of detail to which a cost-benefit analysis should descend, both suggest that courts should analyze the

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<sup>192</sup> Alternatively, a statutory royalty may have been imposed by either the courts or the legislature. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 499 (1984)

balance of competing interests of the copyright owner and the public; and that resulting balance should then be applied to determine whether a particular use is fair or foul, based on its net contribution to social welfare.<sup>193</sup> Fisher and Lunney each acknowledge the practical difficulties inherent in resolving fair use cases through a judicial cost-benefit analysis, yet both also advocate that approach nonetheless.<sup>194</sup>

Lunney is more detailed about what he thinks courts should do. He argues that in order to prevail against an assertion of fair use, copyright owners should demonstrate both that the use in question presents a “meaningful likelihood of actual or future harm” to the value of the work,<sup>195</sup> and that such harm will translate into a negative marginal effect on the output of creative works.<sup>196</sup> If, and only if, both reduction in market value and reduction in incentives are established by the copyright owner, should courts then balance the harm to the copyright owner with the public’s interest in allowing the use to continue nonetheless.<sup>197</sup>

Some clue as to the extent of particularization required by Lunney’s approach is found in his examples. Lunney illustrates the logic of his cost-benefit analysis through a detailed analysis of the economics of allowing unauthorized time-shifting of broadcast television through digital video recorders.<sup>198</sup> Lunney’s intricate cost-benefit analysis of

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<sup>193</sup> Lunney, *supra* note 131, at 999; Fisher, *supra* note 131, at 1699.

<sup>194</sup> Lunney argues that “[a]lthough striking such an ideal balance in every case remains beyond the reach of our current legal and economic understanding, we can come considerably closer to the ideal balance by examining the competing public interests directly, rather than by continuing to rely on the four nineteenth century factors.” Lunney, *supra* note 131, at 999. Similarly, Fisher asks rhetorically “[i]f such a comparative analysis must be employed in most cases, is not economic analysis in this doctrinal context hopelessly impracticable? ... Even so, the analysis may have considerable value. The assumptions used ... were not wildly unrealistic. Some of the conclusions reached by the hypothetical judge may survive transition to the real world. Moreover, a simplified version of the procedure might enable a court at least to increase allocative efficiency, if not to maximize it.” Fisher, *supra* note 131, at 1718.

<sup>195</sup> Lunney, *supra* note 131, at 1000.

<sup>196</sup> *Id.* at 1023.

<sup>197</sup> *Id.*

<sup>198</sup> *Id.* at 1000-14.

time-shifting would require a court to determine, (i) the correlation between advertising and consumer spending, (ii) the ratio of advertising to content on broadcast television, (iii) the extent to which consumer exposure to advertising has diminishing returns, (iv) the average consumer's reduced consumption of advertising, and (v) the extent to which other forms of broadcast based advertising, such as product placement, would counteract the effect of commercial skipping DVRs.<sup>199</sup>

A highly specific cost-benefit analysis of the economic efficiency of granting (or denying) fair use appears to be both fundamentally impractical and inherently speculative. These concerns are addressed in turn.

First, although courts are capable of deciding complex questions of fact and weighing expert testimony across a whole range of issues, the notion that a highly specified cost-benefit analysis would be an efficient use of scarce judicial resources strains credibility. The extensive industry surveys and lengthy economists' briefs required to answer such questions are likely to exceed the patience of most courts and the resources of most parties. As many fair use cases involve new technologies, courts should be particularly "mindful of the limitations facing judges where matters of technology are concerned."<sup>200</sup>

Second, finding the optimum level of copyright scope for any given market is inherently speculative. For example, a court asked to rule against the use of lengthy plot summaries in film reviews would have to consider the following: (i) the potential increase

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<sup>199</sup> This fifth consideration was not mentioned by Lunney, which further illustrates the difficulty of the task he envisages. *See* Lunney, *supra* note 131.

<sup>200</sup> *MGM Studios Inc. v. Grokster, Ltd.*, 125 S. Ct. 2764, 2792 (2005) (Breyer, J., concurring). ("Judges have no specialized technical ability to answer questions about present or future technological feasibility or commercial viability where technology professionals, engineers, and venture capitalists themselves may radically disagree and where answers may differ depending upon whether one focuses upon the time of product development or the time of distribution.").

in revenue to the copyright holder from licensed plot summaries; (ii) the effect of that potential increase in revenue on the production of films; (iii) the potential decrease or increase in the public's enjoyment of film reviews; and (iv) the likely effect on the public's demand for films. As with Lunney's own example of the DVR, the net welfare consequences are extremely uncertain and could easily tip one way or the other based on minor changes in the court's underlying assumptions.

Adding to this impracticality is the possibility of unforeseen interactions between variables. The peculiar economics of intellectual and creative output may result in unauthorized uses actually benefiting copyright owners,<sup>201</sup> in spite of vigorous protestations to the contrary. An unauthorized use might expand the market for the original work and thus benefit the copyright owner. The *Sony* decision provides the paradigm example: in 1981 the head of the Motion Picture Association of America (MPAA) told Congress that "the VCR is to the American film producer and the American public as the Boston strangler is to the woman home alone."<sup>202</sup> And yet, MPAA members now earn a significant proportion of their revenues from VCR sales and DVD sales;<sup>203</sup> the Boston strangler was never so generous. The Supreme Court's willingness to speculate as to the potential market expansive effects of unauthorized uses in what was widely perceived as a test case, does not itself suggest that courts should routinely engage in this

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<sup>201</sup> Gregory M. Duhl gives three examples of this perverse effect: unauthorized fan comics in Japan, unauthorized home video recording, and unauthorized music sampling. See Gregory M. Duhl, *Old Lyrics, Knock-Off Videos, And Copycat Comic Books: The Fourth Fair Use Factor In U.S. Copyright Law*, 54 SYRACUSE L. REV. 665, 668 (2004).

<sup>202</sup> Home Recording of Copyrighted Works: Hearings on H.R. 4783, H.R. 4794, H.R. 4808, H.R. 5250, H.R. 5488, and H.R. 5705 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary, 97th Cong, 2d Sess. 5 (1982) (statement of Jack Valenti, President, Motion Picture Association of America).

<sup>203</sup> According to the MPAA, there was a \$22 Billion market for DVDs and VHS tapes in the U.S. alone in 2002. See Motion Picture Association of America, *2003 Piracy Fact Sheets: US Overview*, available at <http://www.mpa.org/PiracyFactSheets/PiracyFactSheetUS.pdf>.

kind of speculation, or that similar cases should be reargued whenever there is a minor change in the underlying economics of the broadcast industry (such as a demographic shift) or the technology of home recording (such as a faster fast-forward button).

Of course, impracticality is not necessarily fatal to a proposed legal reform; the suggested course of action can be taken as aspirational, not literal. Fisher argues that courts would benefit from implementing his proposed cost-benefit analysis in spite of its practical limitations. According to Fisher, the method has value as a means through which courts might at least “increase allocative efficiency, if not to maximize it.”<sup>204</sup> However, a highly specified cost-benefit analysis of the merits of fair use is not simply an unrealistic ideal, it is fundamentally ill-conceived. The root of the problem is that a highly specified cost-benefit analysis trades doctrinal efficiency for the promise of more perfect allocative efficiency, a promise that is in most cases simply illusory.

In addition to its practical limitations in any given case, the benefits of a highly specified cost-benefit approach to fair use are almost certainly outweighed by its broader effects on the copyright system. First, an individuated cost-benefit analysis is inconsistent with the general universality of the copyright law. Copyright vests equally in grocery lists and love letters, which do not depend on copyright’s incentives for their production and distribution, as well as novels and encyclopedias, which typically do. The extent of copyright protection does vary from work to work, because of the requirements of the idea-expression distinction, but this modification is independent of any assessment of the need for incentive.<sup>205</sup> Asking courts to fine-tune copyright protection based on an

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<sup>204</sup> Fisher, *supra* note 131, at 1719.

<sup>205</sup> See, *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) (Copyright in a factual compilation is thin. Notwithstanding a valid copyright, a subsequent compiler remains free to use the facts

assessment of the author's need for incentive runs contrary to the universalism of the current copyright system. As the Fifth Circuit held in *Mitchell Brothers*:

Congress has concluded that the constitutional purpose of its copyright power, to promote the Progress of Science and useful Arts, is best served by allowing all creative works (in a copyrightable format) to be accorded copyright protection regardless of subject matter or content, trusting to the public taste to reward creators of useful works and to deny creators of useless works any reward.<sup>206</sup>

Indeed, the more case-specific rules become, the less point there is to having a copyright system at all. As Louis Kaplow observed in relation to the intersection between antitrust law and patent law:

In theory, direct reward systems are preferable because they avoid the monopoly costs associated with a general patent system. A central reason for reliance on a patent system is that it is thought to be too difficult to determine the appropriate level of reward fairly and accurately on a case-by case basis.<sup>207</sup>

The same reasoning applies to copyright and fair use. The cost-benefit logic suggests that, in every single case or at least in a highly specified subset of cases, judges should attempt to perfectly balance the author's incentive requirements with the public benefits of increased access. In any individual case, this analysis is unlikely to be able to be properly undertaken by any judge. In the aggregate, if this approach were taken, any welfare gains achieved by fine-tuning copyright scope would be outweighed by the losses in doctrinal efficiency. Doctrinal efficiency in copyright necessitates both under-protection and over-protection; consequently, even copyright pessimists must endure some measure of optimism for the sake of an efficient universal system. In terms of the copyright system generally, highly specified cost-benefit judging would make copyright

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contained in another's publication to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement.)

<sup>206</sup> *Mitchell Bros. Film Group v. Cinema Adult Theater*, 604 F.2d 852, 855 (5th Cir. 1979) (quotes omitted).

<sup>207</sup> Louis Kaplow, *The Patent-Antitrust Intersection: A Reappraisal*, 97 HARV. L. REV. 1813, 1844 (1984).

legislation redundant. Indeed, the logical conclusion of the cost-benefit approach is that legislative guidance on copyright law should be entirely replaced by individually crafted judicial determinations of rights.

Second, any benefits of applying a cost-benefit approach to fair use in individual cases would also be outweighed by its broader effects on the copyright system, because the narrow fact findings of such cases would have little or no value as precedent. In our common law judicial system, litigation has both a private and public benefit: it resolves disputes between the parties and develops and/or clarifies the law for the benefit of all society.<sup>208</sup> If fair use decisions were arrived at by comparing the precise social value of additional authorship resulting from prohibiting an unauthorized use against the social value of allowing the unauthorized use to continue, subsequent cases with similar facts could be decided differently based only on esoteric questions of valuation or minor changes in the underlying markets. The cost benefit approach invites the losing plaintiffs in the *Sony* case to start litigation all over again in response to demographic changes or shifts in consumer tastes. Any change in these factors could tip the balance of competing interests between the copyright owners and the public, even though none of them relate to the actions of VCR manufacturers.

The chilling effect of law without significant precedent value poses a significant threat to continued innovation in technologies that have both infringing and non-infringing uses and to free expression more generally. The entire purpose of the staple article of commerce doctrine applied in *Sony* is to provide *ex ante* certainty to those who

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<sup>208</sup> Frank Partnoy, *Synthetic Common Law*, 53 KAN. L. REV. 281 (2005) (Explaining the theory that “by reporting decisions, courts generate a public record of what otherwise would be only unwritten law, customs, and oral legal traditions. Especially in the business context, the certainty generated by a written record is essential; common law provides certainty by enabling parties to rely on reported judicial decisions.”)

develop new products.<sup>209</sup> The aim of the staple article of commerce doctrine is clearly undermined if the results of litigated cases are so easily disturbed as the logic of a cost benefit analysis implies. As Justice Breyer's concurring opinion in *Grokster* explains, without the ability to rely on the existence of a substantial non-infringing use:

Inventors and entrepreneurs (in the garage, the dorm room, the corporate lab, or the boardroom) would have to fear (and in many cases endure) costly and extensive trials when they create, produce, or distribute the sort of information technology that can be used for copyright infringement. ... The additional risk and uncertainty would mean a consequent additional chill of technological development.<sup>210</sup>

The Supreme Court's emphasis on a case-by case approach to fair use does not suggest that all traces of precedent should be removed from fair use jurisprudence.<sup>211</sup>

Indeed, the Court has crafted broad fair use exemptions for both parody and criticism which are entirely untethered to a cost benefit analysis. As the Court clearly stated in *Campbell*:

[T]here is no protectable derivative market for criticism. The market for potential derivative uses includes only those that creators of original works would in general develop or license others to develop. Yet the unlikelihood that creators of imaginative works will license critical reviews or lampoons of their own productions removes such uses from the very notion of a potential licensing market.<sup>212</sup>

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<sup>209</sup> *MGM Studios Inc. v. Grokster, Ltd.*, 125 S. Ct. 2764, 2791 (2005) (Breyer, J., concurring).

<sup>210</sup> *Id.* at 2793.

<sup>211</sup> *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 577, 581 (1994) (The task is not to be simplified with bright-line rules, for the statute, like the doctrine it recognizes, calls for case-by-case analysis.); *Harper & Row*, 471 U.S. 549, 561, 597; *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 495 (1984).

<sup>212</sup> *Campbell v. Acuff-Rose Music*, 510 U.S. 569, 592 (1994). Admittedly, the clarity of this statement is somewhat diminished by the Court's insistence that the adjudication of fair use cases is "not to be simplified with bright-line rules." *Id.* at 277.

Congress has clearly indicated that the courts should continue to develop the fair use doctrine through the common law.<sup>213</sup> The common law requires the development of principles, not the mere determination of cases. Decided cases should offer some guidance to copyright owners and members of the public alike, as to which activities are likely to be infringing and which are not.

Furthermore, doctrinal efficiency is far more than just a question of the frequency of litigation. Reliance on the judicial process (or an administrative process) magnifies the level of uncertainty faced by all potential parties and multiplies opportunities for strategic behavior.<sup>214</sup> As I have suggested elsewhere, it may be the case that the uncertainty costs of a flexible fair use doctrine are worth the benefits,<sup>215</sup> but it would still be wise to try to keep those costs contained. In its paradigm form, the cost-benefit approach treats welfare as purely determined by the sum of costs and benefits in individual cases, without regard to either the costs of state action or the likely multiplication of cases and threats of litigation.

### 3. Variation in the Scope-Welfare Relationship

The third metric that can be used to assess law and economics doctrinal recommendations focuses on the variation and complexity of the scope-welfare relationship. It asks whether the recommended application is feasible in light of the expectation that there will be substantial variation, both within and between industries, in the welfare-scope relationship. The paradigm case by case cost-benefit analysis clearly

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<sup>213</sup> In enacting 17 U.S.C. § 107, Congress meant to restate existing judicial doctrine of fair use, not to change, narrow, or enlarge doctrine in any way, and intended that courts continue common law tradition of fair-use adjudication. *See* *Campbell v Acuff-Rose Music*, 510 U.S. 569, 577 (1994).

<sup>214</sup> *See* Part II. C., *supra*.

<sup>215</sup> *Sag, supra* note 14.

addresses the need to account for variation in the scope-welfare relationship, but it must be rejected under the doctrinal efficiency criteria for the reasons given above. A more broadly based cost benefit approach to fair use, one that varied industry by industry, as opposed to case by case, avoids most of the gross doctrinal inefficiency of the paradigm model but necessarily trades off greater efficiency for a less nuanced account of variation in the welfare-scope relationship.

Arguably, the paradigm case is just an idealization, and is not meant to be taken literally. However, even if we assume that a cost-benefit approach should be applied in a more general fashion, to classes of works, rather than individual works,<sup>216</sup> we are still left with the problem of deciding where to draw the boundaries between classes.

Although tailoring specific doctrines to the need for incentives in particular industries may be desirable in theory, its application is hazardous. There are at least five hazards worth exploring:

- (1) Industries are constantly evolving, thus industry definitions are inherently fluid and resist legal definition;
- (2) Legal proceedings may become dominated by questions of taxonomy as the parties lobby for competing industry definitions;
- (3) Intra-industry variation may be just as significant as inter-industry variation depending on the level of generality of the industry definition used;
- (4) Inter-industry effects are likely to be ambiguous;

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<sup>216</sup> Loren seems to indicate the former, Lunney the later. See Loren, *supra* note 133, at \_\_; Lunney, *supra* note 131.

- (5) Industry tailoring may have negative effects on the overall political economy of copyright law.

This is not to suggest that industry tailoring is never appropriate, rather that its feasibility must be carefully considered. However, an industry tailoring approach to the fair use doctrine seems particularly unworkable for all of the reasons given above.

The first three hazards relate to the difficulty of defining exactly where one industry stops and another begins. Although a number of authors have recommended a status driven approach to fair use, one that preferences educators, scientists and news reporters,<sup>217</sup> it is by no means clear what the boundaries of any of these classes might be.

The broader the industry definition used, the more likely it is that intra-industry variation be as significant as the inter-industry variation which supposedly justified a tailored approach to fair use. But even within a fairly narrow industry definition, such as computer software, incentive effects and requirements for copyright protection can differ. As Yochai Benkler argues, expansionist intellectual property regimes tend to favor some producers and disfavor others, depending on their information production strategy.<sup>218</sup> Open source software and commercial software often compete side by side in the market place, but their production strategies are radically different. So in spite of being in the same industry, information producers may well differ in their reliance on direct appropriation of their information outputs, they will be differently affected by an expansion of intellectual property rights. The more a producer relies on direct appropriation of its information outputs, the more likely it is to find that the increased

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<sup>217</sup> See, e.g., Fisher, *supra* note 131, at 1744.

<sup>218</sup> Benkler, *supra* note 96.

costs of greater copyright scope are matched by increased revenues.<sup>219</sup> In contrast, information production strategies that rely on indirect appropriation and non-monetary gains are likely to be prejudiced by an increase in copyright scope.

The fourth consideration is that even if a court was presented with sufficient evidence to determine the optimal level of copyright scope for a particular market, it would then have to consider how changes in one market might distort other markets. For example, finding the optimum trade-off between increasing incentives and reducing the cost of expression for a particular genre of novels might distort the downstream market for screen-plays in the same genre, some of which are derived from novels and some of which are not. However well intended, tilting the scales of copyright in one market is likely to have unintended consequences and potential multiplier effects in other markets. These judgments need to be based on sound theoretical approaches and/or broad based empirical evidence, not merely a cost-benefit analysis of one narrow case or class of cases.

The fifth consideration is that an industry level cost-benefit analysis would significantly expand opportunities for rent seeking in copyright law. If judges explicitly craft rules to apply differently to particular industries, the ability of those industries to lobby Congress for particularized benefits will only increase. While there are numerous examples of special interest rent seeking in the current copyright law, this type of particularism is limited by the universalism of copyright. As such, industry based cost-benefit rules may well subvert the aims of their proponents.<sup>220</sup>

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<sup>219</sup> *Id.* at 83.

<sup>220</sup> Dan Burk and Mark Lemley raise a similar concern with respect to industry differentiation in patent law. Although Burk and Lemley have advocated tailoring patent protection to the needs of specific industries in light of industry based variation in economic evidence, patent doctrine, and legal theory, they

#### 4. Overall assessment of the Cost-Benefit Approach to Fair Use

In its paradigm form, the cost benefit approach to fair use fails to account for the high costs and speculative benefits of asking judges to fine tune the scope of copyright. Various applications of the market failure approach have been rightly criticized for simply presuming the efficiency of private ordering without any serious empirical or theoretical inquiry.<sup>221</sup> The opposite criticism can be leveled at the cost-benefit approach to fair use. The implicit assumption of the cost benefit approach to fair use is that every litigated fair use case represents a failure of private ordering and that such failures will continue even after judicial resolution of like cases. The cost-benefit approach is also limited by its failure to recognize the significance of the significant costs associated with its (arguably futile) pursuit of more perfect allocative efficiency.

Is there an alternative? An industry based cost-benefit analysis of fair use incorrectly focuses on the status of the defendant, rather than the nature of her conduct. An alternative approach to fair use that may meet many of the objectives of the cost benefit approach is to concentrate on identifying situations in which fair use should be presumed. Such an approach is consistent with the current doctrinal framework of fair use, it can be incorporated into the general market failure framework and it lends itself to the application of economic analysis in the form of game theory and many other analytical tool-sets.

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concede that there are a number of risks inherent in such a technology-specific approach. In particular, they acknowledge because of “concerns about rent seeking and the inability of industry-specific statutes to respond to changing circumstances, ... we should not jettison our nominally uniform patent system in favor of specific statutes that protect particular industries.” Burk & Lemley, *supra* note 104, 1578-79. However, as Polk Wagner points out, these political economy concerns should not be confined to legislative particularism. R. Polk Wagner, *Exactly Backwards: Exceptionalism and the Federal Circuit*, 54 CASE W. RES. L. REV. 749, 755 (2004).

<sup>221</sup> See Cohen, *supra* note 5, at 465 (criticizing the assumptions of those who predict the irrelevance of fair use in cyberspace as unproven and unjustified in the case of creative and informational works).

#### D. Revisiting the Law and Economics Theories of Fair Use

The aim of this article was develop an economic model of copyright scope and doctrinal efficiency as a vehicle for evaluating the welfare implications of changes in the breadth of the rights vested in copyright owners. In order to make the transition from abstract theory to practical implementation, a set of metrics were established to assess specific doctrinal recommendations. The metrics do not definitively determine which doctrinal proposals are either efficient or normatively desirable, but they are useful in both filtering out some ill-conceived recommendations, and identifying areas for improvement in others.

The application of these metrics to the predominant law and economics theories of fair use undertaken in this Part illustrates the potential of this approach. This metric driven analysis demonstrates the general robustness of the market failure approach to fair use and the relative frailty of the competing cost benefit approach. Importantly, the application of the metrics also indicates how the market failure approach can be improved.

This article's main substantive recommendation with respect to the fair use doctrine is that the market failure approach should be modified to incorporate a more discerning basis for allocating the burden of proof. One method of doing this is to apply some of the observations from game theory, behavioral economics and industrial organization to identify scenarios where the market is likely to fail, or scenarios in which the potential consequences of market failure justify a presumption that errs in favor of finding fair use. This approach is preferable to an industry tailored cost benefit approach because it asks courts to focus on the nature of the defendant's conduct, not her broader

status or affiliation. Courts should continue to develop the common law of fair use and attempt to identify situations in which the failure of the market for permissions should be presumed. Courts already appear to make this presumption with respect to parody, criticism, review, trivial quotation and the reverse engineering of computer software. This situational approach preserves the flexibility of the common law, is easily incorporated into a market failure framework, and lends itself to the application of sophisticated economic analysis in a form that courts can actually use.

## CONCLUSION

The significant and growing influence of law and economics analysis of copyright is a positive development. Economics provides powerful analytical tools for understanding the nature of the copyright system and the costs and benefits of a range of policy recommendations. As David Friedman observes, at the most fundamental level, the subject of economics is not money or the economy, but the implications of rational choice in response to incentives.<sup>222</sup> Economics is an essential tool for understanding the effects of legal rules.<sup>223</sup> Economic analysis is particularly useful in that it allows us to simplify complex problems to see the larger picture and to abstract from specific situations to more general principles. However, the potential problem with law and economics theories of copyright is that they may overlook significant factors in the course of this abstraction.

Uncertainty as to the optimum extent of protection has generally limited the capacity of law and economics to translate economic theory into coherent doctrinal recommendations in the realm of copyright. By exploring the relationship between copyright scope, doctrinal efficiency and welfare from a theoretical perspective, this article has developed a framework for evaluating specific doctrinal recommendations in copyright law.

The analysis of copyright scope and doctrinal efficiency developed in this article leads to four conclusions, three of which in turn provide useful metrics or benchmarks for assessing doctrinal recommendations. The first (by no means novel) conclusion is that the ideal extent of copyright scope must be both more than nothing, and less than everything.

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<sup>222</sup> David D. Friedman, *LAW'S ORDER: WHAT ECONOMICS HAS TO DO WITH LAW AND WHY IT MATTERS* 9 (2000)

<sup>223</sup> *Id.*

The more tractable implications of the theoretical exploration of the relationship between copyright scope and welfare are: (1) the efficiency of private ordering is the key determinant of the ideal level of copyright scope; (2) the complexity of the welfare-scope relationship is such that we are unlikely to be able to ascertain a generalizable optimal level of copyright scope – the relationship will clearly be subject to substantial variation, both within and between industries; (3) doctrinal recommendations which aim to optimize copyright scope in the abstract but do not account for the effect of a doctrinal change on transaction costs, uncertainty or strategic behavior are necessarily incomplete.

This importance of this analysis has been discussed primarily in relation to law and economics theories of secondary liability for consumer infringement and the fair use doctrine. However, there is no reason to think that the utility of this metric driven method of analysis should be limited to those two areas. Given the broad reach of modern copyright and the intense policy debates it generates, there is likely to be shortage of reform proposals to which this method can be applied. It is becoming increasingly common to think of copyright doctrines as levers to be adjusted in the pursuit of a more perfectly tailored legal system. But, as this article has demonstrated, merely presenting the potential benefits of a more perfectly tailored copyright system does not provide a mechanism to select which lever to pull or to understand when the costs of such tailoring are likely to exceed the benefits. The metric driven analysis presented in this article provides one such mechanism and may help move the law and economics of copyright beyond abstraction.