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Articles

Shall We Dance?
When Law and Economics Meets Copyright [*]

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Abstract

In the late 1960s and early 1970s, Law and Economics emerged as a wholly new field of legal research and study. Economics provides not only a behavioral theory to predict how people respond to changes in laws, but also a useful normative standard for evaluating law and policy. In the eyes of economists, laws are instruments for achieving important social goals, namely, resources allocative efficiency. In the area of Copyright Law, economic analysis has taken an important role in examining the conflict of interests between copyright owners and public. Scholars and experts of law and economics have been working to find out the most efficient way to allocate the scarce resource and to maximize social welfare – in copyright law, is the Constructional object of promoting the progress of science and useful art. In this article, the author will first introduce the movement of Law and Economic Analysis, and illustrate the development and the central

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contentions of different schools. The author will also present a briefly historical background of the U.S. Copyright Act, in which, the economic factors and the growth of technologies pour a heavy influence into the development of that Act. Next, the author will describe the various approaches employed by the Law and Economic analysis, through first defining some basic concepts of economics analysis, and then try to apply Law and Economic analysis to the U.S. copyright law, particularly in the copyright infringement cases which involved the application of Fair Use Doctrine, in order to survey the advantages and limits of the adoption of Law and Economic analysis, under the ultimate object of “Promoting the Science and Useful Art.”

Keywords: Copyright, Law and Economics, Fair Use Doctrine

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法律經濟學與著作權共舞

胡心蘭

摘 要

自 1960 年代時起，法律經濟學即成爲一門新興的法律研究方法，經濟學不但改變了法學研究的本質，改變了一般對於法律規則、制度的瞭解，甚至改變了律師執業的方式。經濟學不但提供用以預測人類如何回應法律規定之變革的行爲學理論外，其亦提供用以評價法律與政策的規範基準（Normative Standard）。在經濟學家的眼中，法律係促進重要社會目的之工具，而此一「重要社會目的」即爲資源分配效率。

在著作權法領域中，法律與經濟學分析在檢驗著作權人與一般使用者大眾間之利益衝突時扮演著極重要的角色。法律與經濟學之學者專家們正不斷努力尋找最有效率之方法來分配有限資源並將社會福利推展至極致——就著作權法而言，其目標即爲美國憲法之智慧財產權條款所揭示：促進科學及實用藝術之發展。著作權法最重要的課題就是在著作權人的獨占利益與社會大眾接觸、使用著作權的利益間取得平衡，達到此一平衡，就可達到資源分配效率。而合理使用原則長久以來一直被視爲平衡此一專屬壟斷權利之必要限制。

本文作者將先簡介法律經濟學的發展背景，並就經濟學的思考脈絡以及其與著作權相關的專有名詞做一概要說明。接著，作者將嘗試由著作權法的發展歷史中尋找其經濟學理上之根源，以說明爲何以法律經濟學之分析方法來分析著作權法是適當且具說服力的。最後，本文作者將整理數種以法律

經濟學就著作權法上之合理使用原則爲分析之方法，闡釋爲達到著作權領域之資源分配效率——促進科學及實用藝術之發展——則不論科技發展如何改變著作權市場之環境，合理使用原則均應存續，以發揮其平衡著作權人與使用人間之利益衝突的功能。

關鍵字：著作權、法律經濟學、合理使用原則

1. INTRODUCTION: A SURVEY OF THE LAW AND ECONOMIC MOVEMENT

In the late 1960s and early 1970s, Law and Economics emerged as a wholly new field of legal research and study. As described by the Law and Economics Professors Robert Cooter and Thomas Ulen: "Economics has changed the nature of legal scholarship, the common understanding of legal rules and institutions, and even the practice of law."[1] Economics provides not only a behavioral theory to predict how people respond to changes in laws,[2] but also a useful normative standard for evaluating law and policy. In the eyes of economists, laws are instruments for achieving important social goals, namely, resources allocative efficiency.[3]

In the area of Copyright Law, economic analysis has taken an important role in examining the conflict of interests between copyright owners and public. Scholars and experts of law and economics have been working to find out the most efficient way to allocate the scarce resource and to maximize social welfare – in copyright law, is the Constructional object of promoting the progress of science and useful art. U.S. Seventh Circuit Court Judge Posner, who is well-known for applying economic analysis in his opinions, once stated: "Intellectual property is a natural field for economic analysis of law, and copyright is an im-

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1 *See* ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 2 (3d ed. 2000).

2 To economists, sanctions look like prices, and presumably, people respond to these sanctions mush as they respond to price, therefore, economists presume, people respond to heavier legal sanctions by doing less of the sanctioned activity. *Id.* at 3.

3 *Id.* at 4.

portant form of intellectual property."[4] Studies in copyright law nowadays inevitably involve the adoption of law and economic approach, which is the measure most accommodating to the current of the times where the economics takes the lead.

In this article, the author will first introduce the movement of Law and Economic Analysis, and illustrate the development and the central contentions of different schools. The author will also present a briefly historical background of the U.S. Copyright Act, in which, the economic factors and the growth of technologies pour a heavy influence into the development of that Act. As announced by the U.S. Supreme Court: "The economic philosophy behind the [Copyright] clause [under the Constitution] empowering Congress to grant patent and copyright is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare."[5] Next, the author will describe the various approaches employed by the Law and Economics analysis, through first defining some basic concepts of economic analysis, and then try to apply Law and Economics analysis to the U.S. copyright law, particularly in the copyright infringement cases which involved the application of Fair Use Doctrine, in order to survey the advantages and limits of the adoption of Law and Economics analysis, under the ultimate object of "Promoting the Science and Useful Art."

1.1 The Previous Law and Economics Movement

1.1.1 The Beginning

The law and economics can be defined as "the application of economic the-

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4 *See* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 325 (1989).

5 Mazer v. Stein, 347 U.S. 201, 219 (1954) (emphases added).

ory and econometric methods to examine the formation, structure, processes and impact of law and legal institutions."[6] As early as the late eighteenth century, while Adam Smith wrote his *Inquiry into the Nature and Causes of the Wealth of Nations* at 1977,[7] the classic economics has become a tool for analysis of human behavior, particular policy or rule, and offer practical economic policy advice to rulers of the day.[8] For instance, Adam Smith deemed the temporary monopoly granted to a company of merchants on its new establishing trade as justified on the same ground as a monopoly granted to an inventor on her new machine, or granted to an author on her new book.[9] In this period, "[l]aw is seen here, in utilitarian fashion, as contributing to the public good, indeed as an instrument for promoting it."[10] However, all of these late-eighteenth-century economic writings did not amount to a systematic understanding of law through a rational choice model.

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6 *See* Ejan MacKaay, *History of Law and Economics*, *in* ENCYCLOPEDIA OF LAW AND ECONOMICS § 200, at 65 (Boudewijn Bouckaert & Gerrit De Geest eds., 1999), *available at* http://encyclo.findlaw.com/0200book.pdf (last visited Aug. 21, 2007) (citing Charles K. Rowley, *Public Choice and the Economic Analysis of Law*, *in* LAW AND ECONOMICS 123 (Nicholas Mercuro ed., 1989)).

7 ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS (1776), *available at* http://www.adamsmith.org/smith/won-index.htm (last visited Aug. 21, 2007).

8 *See* MacKaay, *supra* note 6, at 68.

9 MacKaay, *supra* note 6, at 68 (citing SMITH, *supra* note 7, bk. V, ch. I, pt. Ⅲ, art. 2, at 712).

10 *See* MacKaay, *supra* note 6, at 68. For example, David Hume had a clear grasp of the intricacies of human interaction such as game theory formalizes them in our day, he presents law as a set of conventions which humans have learned to conform to in order to make co-operation possible in a world of scarcity and limited foresight. *See id* (citing DAVID HUME, A TREATISE OF HUMAN NATURE (Clarendon Press 2d ed. 1978)).

1.1.2 The Economists' New Science of Law Movement (1830-1930)

The name of this movement was given by Professor Heath Pearson in a historical study entitled *Origins of Law and Economics.*[11] The fundamental question asked by the economists in this movement was "how property and other rights were determined, historically and functionally, across different societies."[12] The answer developed by the sixteenth and seventeenth century philosophers, that these rights were given as a matter of natural law, logically prior to any positive legal system, no longer convincing the economists in this movement. It could not account for the variations of rights in time and space. Changes in property rights, in their view, should be expected to reflect changes in economic conditions. What they were seeking to develop was "an explanatory science of rights."[13] The core thesis of the movement, that rights were contingent upon economic and social conditions, came to be widely accepted.[14]

Professor Pearson found that the considerations of economists in this movement about transactions costs familiar in current law and economics studies, but also acceptance of the wisdom embodied in institutions which have evolved in the course of history.[15] The explanations proposed them may be properly called economic in that they rely on costs and benefits to individuals, who choose rationally in an environment of scarce resources. "These are to this day the pillars of eco-

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11 MacKaay, *supra* note 6, at 69 (citing HEATH PEARSON, ORIGINS OF LAW AND ECONOMICS - THE ECONOMISTS' NEW SCIENCE OF LAW 1830-1930 (1997)).

12 PEARSON, *supra* note 11, at 33.

13 *Id.*

14 MacKaay, *supra* note 6, at 69.

15 PEARSON, *supra* note 11, at 43-70.

nomic reasoning."[16]

However, with the increasing specialization amongst social scientists, which led economists to restrict their attention to matters unquestionably related to markets, and with the excessive claims made for the movement and the increasing fuzziness of the 'economic' methodology on which it relied,[17] and more importantly, with the lack of participation from the legal community, who remained of the view that economic factors alone could not account for the fullness of the "tendencies and aspirations of the human soul" reflected in the law,[18] the "Economists' New Science of Law Movement" faded away by the 1930s as a distinct contribution of economics to the understanding of law, to make room for the sociology of law and legal realism.[19]

1.2 The Current Law and Economics Movement

1.2.1 The Traditional Chicago School Economic Analysis of Law

As the rise of the Chicago School of economics, which launched because Aaron Director, an economist, appointed to the Chicago Law School at 1940s, the once degenerate Law and Economics revived with a new approach, the Neoclas-

16 MacKaay, *supra* note 6, at 70.

17 Some members of the movement let themselves be tempted to explore explanations that strayed increasingly away from the strictly individualist rational choice model to 'holist concepts' such as 'national spirit', 'socio-psychic motives' and 'collective will' or to 'the psychological-moral life of nations'. As the economics profession specialized, such explanations seemed more and more heretical to economists. *See* PEARSON, *supra* note 11, at 153-58.

18 *Id.* at 114.

19 MacKaay, *supra* note 6, at 71.

sic economic analysis of law.[20] The Chicago group came to adopt a distinct approach to economic analysis, which insisted on generating testable predictions and on conducting empirical research for the purpose of such tests.[21] "Indeed, the defining traits of Chicago neo-classicals – the suspicion of government and the insistence that markets protect rational individual choice and self-determination – reflect a distinctively American style of individualist ideology."[22] Neo-classical economists assumed a clear distinction between markets and non-market settings. They were interested in markets, not in institutions.[23]

The fundamental tenet of the Traditional Chicago approach is that competition within a perfect market will lead to efficiency, which is the desirable normative goal of the legal system.[24] Central intervention within the market is justified only when there is a market failure, such as the problem of monopolies; the problem of asymmetric information; the problem of externalities; or when the traded commodity is a public good.[25] For example, Director himself introduced an integrated study into the area of monopoly regulation and concluded that monopoly was more often alleged than it was effectively present and detrimental to con-

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20 *Id.* at 72.

21 Manfred Reder, *Chicago School*, *in* THE NEW PALGRAVE–THE WORLD OF ECONOMICS 40 (John Eatwell, Murray Milgate & Peter Newman eds., 1987).

22 MacKaay, *supra* note 6, at 72 (citing NEIL DUXBURY, PATTERNS OF AMERICAN JURISPRUDENCE 418 (1995)).

23 Markets were considered the natural state of things. They were presumed to have always been there. Neo-classical economists were not interested in their formation. *See* Ron Harris, *The Encounters of Economic History and Legal History*, 21 LAW & HIST. REV. 297, 300 (2003).

24 *See* Niva Elkin-Koren & Eli M. Salzberger, *Law and Economics in Cyberspace*, 19 INT'L REV. L. & ECON. 553, 555 (1999).

25 *Id.*

sumer interests.[26]

Director's effort raised the interests of the legal community: during the 1940s and 1950s a variety of studies of legal subjects, such as antitrust, corporate law, bankruptcy, securities regulation, labor law, income tax, public utility regulation and torts, has been discussed in economic terminologies.[27]

1.2.2 The New Chicago School Economic Analysis of Law: Transaction Cost Analysis

As discovered by Professor Epstein, who was pessimistic about the further of Law and Economics, that "[t]he early use of economics, … was not thought in any obvious sense to be generalizable to other areas of legal endeavor, and certainly not to such areas as constitutional, family, or criminal law. Only with the new work of the 1960s were the broader connections clearly seen."[28] The "new work" indicated by Professor Epstein, is the masterpiece of Ronald Coase, *The Problem of Social Cost*,[29] which published in the newly founded *Journal of Law*

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26 MacKaay, *supra* note 6, at 72.

27 *Id.*

28 *See* Richard A. Epstein, *Law and Economics: Its Glorious Past and Cloudy Future*, 64 U. CHI. L. REV. 1167, 1167 (1997). Professor Epstein worry about the further of Law and Economics because he thinks that "[f]amiliar doctrinal issues are exhausted: we do not need yet another theoretical article that proves the (in)efficiency of comparative negligence. So where do we go? … In a sense, Law and Economics has been a victim of its own success. Once its principles were understood, then only the task of mopping up remained." *Id.* at 1174.

29 Ronald Coase, *The Problem of Social Cost*, 3 J. L. ECON. 1, 44 (1960) (*reprinted in* THE FIRM, THE MARKET AND THE LAW 95 (1988)). Harold Demsetz was amongst the earliest scholars realizing the significance of the article. He underscored it in a series of perceptive articles and first used the term "the Coase theorem." *See* MacKaay, *supra* note 6, at 74.

and Economics with Aaron Director as its first editor. The foundation of the *Journal* and the publishing of Coase's *Social Cost* have been marked as the division between Old and New Law and Economics.[30] The research agenda of "new" law and economics was to apply "economics to core legal doctrines and subjects such as contract, property, tort and criminal law"[31] About the new movement, observed by one scholar, "its distinctive feature is the application of market economics to legal institutions, rules, and procedures which in certain areas (notably in tort and in crime) are not conventionally seen to influence market behavior, but which indeed are defined in terms of market failure."[32]

Coase's *Social Cost* is usually taken to stand for the proposition that externalities are no ground for government intervention, but merely indicate that property rights are not adequately specified, if two parties can costlessly negotiate, specification of rights is sufficient for attaining the optimal ("efficient") outcome; the initial allocation of rights between the parties is indifferent to the economic outcome.[33] The article is also important for drawing attention to the concept of transaction costs. Coase's analysis points at transaction cost as the sole factor that diverts the market from efficiency and, thus, the sole factor to take on board when legal rules are considered.[34] One can rephrase the quintessence of Coase's article as now familiar "Coase theorem": "when transaction costs are zero, an efficient use of resources results from private bargaining, regardless of the legal assignment of property rights." To the contrary, "when transaction costs are high

30 *See* Richard Posner, *The Economic Approach to Law*, 53 TEX. L. REV. 757, 758 (1975).
31 DUXBURY, *supra* note 22, at 340.
32 Rowley, *supra* note 6, at 125.
33 MacKaay, *supra* note 6, at 74.
34 *See* Elkin-Koren & Salzberger, *supra* note 24, at 554.

enough to prevent bargaining, the efficient use of resources will depend upon how property rights are designed."[35]

In Cosae's analysis, he referred mainly to costs of negotiation. A decade later Calabresi and Melamed took the analysis a step further,[36] expanding the notion of transaction cost to include also enforcement and adjudication costs. They focused on the structure of transaction cost as determining the efficient method of protection of entitlements. More specifically, it considers the protection of entitlements by property rules versus such protection by liability rules.[37]

When mention the Chicago School Economic Analysis of Law, one can never omitted U.S. Seventh Circuit Court Judge Posner, whose writings with considerable quantity and quality was the crucial factor interests lawyers and law students to study in the field of law and economics. "Posner's Economic Analysis of Law, which first appeared in 1973, sounded most explicitly the modern theme of economic imperialism: You name the legal field, and I will show you how a few fundamental principles of price theory dictate its implicit economic structure."[38] Through out his influential book, "pursuit of efficiency" is the main thesis penetrates into all rules of the traditional common law, which aims at avoiding waste or maximizing the wealth of society. "The thesis yields an alluring

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35 COOTER & ULEN, *supra* note 1, at 85.

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

37 *See* Elkin-Koren & Salzberger, *supra* note 24, at 568. "Property rules ought to be preferred when negotiation costs are lower than the administrative costs of an enforcement agency or a court determining the value of the entitlement." "Liability rules ought to be preferred when the costs of establishing the value of an initial entitlement by negotiation are higher than the costs of determining this value by an enforcement mechanism." *Id.* at 569.

38 *See* Epstein, *supra* note 28, at 1168.

research agenda: to tease out, using concepts borrowed from neoclassical economics, what would be the "efficient" rules throughout the domains of the traditional common law and to determine whether the common law in fact conforms to this logic."[39]

1.2.3 Neoinstitutional Economic Analysis of Law and of Legal Institutions

The concept of transaction cost has been criticized after a decade from its emergence, largely contributed by the institutionalists.[40] Professor Mackaay identified six questions criticize Chicago approach to law and economics:[41]

a. Efficiency thesis is a circularity thesis: since for any distribution of property rights there is a cost minimizing allocation of resources, cost minimization/efficiency itself cannot be the foundation of the distribution of property rights;

b. The efficiency thesis appears to be non-falsifiable;

c. The historical character of the efficiency thesis: efficiency thesis suggests that efficient legal systems, once decided, need not converge with time. Yet law tends to evolve over time; a solution considered satisfactory yesterday may no longer seem so today;

d. The question about valuation: since whether a legal change is efficiency or not should be decided by the valuation of the gains and losses resulting from the change, on what scale are gains and losses occurring to different people to be weighed?

e. It is difficult to formulate a theory accounting for the emergence of the ef-

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39 MacKaay, *supra* note 6, at 76-77.

40 *Id.* at 77.

41 *Id.* at 77-80.

ficiency logic as suggested by Judge Posner.

f. The distributive questions: even if the core common law rules reflect an efficiency logic, much modern legislation has an obvious redistributive purpose, which sought by citizens through policies they demand from their elected representatives.

Because of the weaknesses of the transaction cost theory, economists toward institutions search for corrections, adjustments, and extensions of the neo-classical paradigm. In doing so, transaction cost theory originally used to analyze the interaction between individuals in the market, soon broadened to include the analysis of the emergence of institutions, their internal decision-making process, and their external interactions. As a result, the methodological tools used for the analysis were expended and shifted toward the Neoinstitutional Economic Analysis of Law and of Legal Institutions.[42] This turn to institutions was a correction of the neo-classical school, not an alternative to it.

Neoinstitutional analysis views the political structure, the bureaucratic structure, the legal institutions, and other commercial and noncommercial entities as affecting each other.[43] "Such a model (Neoonstitutional Economics) tries to account for the interaction, beginning with the economic change, through its effect on the value of the legal institution, say property rights, and its distributive effects on interest groups' gains and losses, through the legal and political process in the state that involves transaction costs – at times change preventing – to the change in property rights and back to its effect on economic performance."[44] "The general effort to take account of information asymmetry and other transaction costs,

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42 Elkin-Koren & Salzberger, *supra* note 24, at 554.

43 *Id*.

44 *See* Harris, *supra* note 23, at 307-08.

while preserving the assumption that individuals maximize utility, is coming to be called 'neoinstitutional economics'."[45] The tools used in the analyses of neoinstitutional law and economics are the traditional microeconomics or welfare economics models,[46] alongside public choice,[47] game theory,[48] and institutional economics.[49]

1.2.4 Summery

There are two findings made by Professor Mackaay suitable as a comment for the briefly survey set above: "The first is that the idea of applying economic concepts to gain a better understanding of law is much older than the current movement, which its proponents date back to the late 1950s. The second finding concerns the current movement. After virtually unquestioned dominance and astonishing success of the Chicago approach in the 1960s and 1970s, since about 1980 practitioners of law and economics no longer sing in a single voice."[50] As pointed out in the second finding, law and economic analysis now developed into several diverse analysis approaches, therefore, compareing the difference between

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45 *See* MacKaay, *supra* note 6, at 83 (citing William Riker & David Weimer, *The Economic and Political Liberalization of Socialism: The Fundamental Problem of Property Rights*, *in* LIBERALISM AND THE ECONOMIC ORDER 79 (Ellen Frankel Paul, Fred D. Miller Jr. & Jeffrey Paul eds., 1993)).

46 Elkin-Koren & Salzberger, *supra* note 24, at 554.

47 Public choice is the application of the rational choice model to political phenomena, the field of political science and of public law. It is a general theory of "how private interests operate in the public domain." MacKaay, *supra* note 6, at 88.

48 Game theory is a mathematical tool for studying interactions amongst people, in which one person's choice depends on what others choose and vice versa. *Id.* at 91.

49 Institutions are rules in a broad sense, which simplify the decision problem for economic actors, by imposing restraints on each person's conduct which render it substantially predictable to others. *Id.* at 82-83.

50 *Id.* at 92.

approaches would be the unavoidable process when apply law and economic analysis to the filed of copyright. In the following discussions, the author will first examine is Copyright Law a appropriate candidate for analyzing in economic approaches and terminologies, then apply diverse economic analysis approaches to the Copyright law, specializing in the doctrine of Fair Use.

2. SHALL WE DANCE – APPLY LAW AND ECONOMIC ANALYSUS TO THE COPYRIGHT LAW

2.1 Should Economics Play a Role in the Copyright Law

In her introductory article *Should Economics Play a Role in the Copyright Law and Policy?*,[51] Professor Pamela Samuelson stated in the first sentence: "The principal justification for intellectual property (IP) laws in the Anglo-American tradition is economic."[52] As mentioned above, Judge Posner also pointed that "Intellectual property is a natural field for economic analysis of law, and copyright is an important form of intellectual property."[53] In what basis these two pioneers in the filed of Law and Economics made these kind of assertions?[54] One may find some clues from the background of Copyright law.

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51 Pamela Samuelson, *Should Economics Play a Role in the Copyright Law and Policy?*, 1 U. OTTAWA L. TECH. J. 1 (2004), *available at* http://www.uoltj.ca/articles/vol1.1-2/2003-2004.1.1-2.uoltj.Samuelson.1-21.pdf (last visited Aug. 24, 2007).

52 *Id.* at 3.

53 *See supra* note 4.

54 There are other scholars made similar statements, *e.g.* John Kay, *The Economics of Intellectual Property Right*, 13 INT'L REV. L. & ECON. 337, 337 (1993) (stating "One hypothesis is that the general purpose of intellectual property law is to promote economic efficiency, and this would certainly be an economist's natural hypothesis."); Mark A. Lemley,

2.1.1 The Historic Background of the Copyright Law

The emergence and early development of the concept of "Copy Right" was linked to the beginnings of the printing press and the expansion of this new medium of expression and its market.[55] Before the first statute of Copyright, the Statute of Anne in England enacted in 1710, the concept of "copy-right" were not primarily intended to protect authors but to protect the interests of the printing press – to help the market develop. The printing privilege was a kind of monopoly, not a kind of property.[56]

However, with the enactment of Statute of Anne, the purpose of the monopoly granted shift largely toward authors and the public. As the full title of the Statute states, this act is "An Act for encouragement of learning, by vesting the copies of printed of books in the authors or purchaser of such copies, during the time therein mentioned."[57] Hence, several metaphors had developed around the concept of author, two primary metaphors being the author as a father of his writings and the author as an owner of his writings (like an owner of real estate).[58]

The Economics of Improvement in Intellectual Property Law, 75 TEX. L. REV. 989, 1074-76 (1997).

55 *See* DEBORA J. HALBERT, INTELLECTUAL PROPERTY IN THE INFORMATION AGE: THE POLITICS OF EXPANDING OWNERSHIP RIGHTS 4 (1999).

56 For the purpose of prohibit heretical or seditious material dismissed by Protestant, the British Royal Family granted exclusive monopoly to the Stationers' Company to publish every book and article in order to facilitate the securitization by the "Star Chamber." Authors and printers were encouraged to continue their work but the exclusive right they obtained was subject to the will of the king and was based on an idea of reward – not on a property form. *Id.* at 2-3.

57 Copyright Act, 1709, 8 Ann. c.19.

58 Stefan Gavrilescu, The Justification of Copyright in the Information Society, *available at* http://www.legi-internet.ro/index.php/Justification_of_copyright_in/100/0/?&L=2 (last visited Aug. 25, 2007) (page number omitted).

These metaphors were used by different parties in the legislative adoption process (authors and publishers) to sustain their own market interests.[59]

The national legislation of the Copyright Act in the United State began at 1789, around the time of the Constitutional Convention. It is said that: "the states felt a strong need for national copyright laws to secure for authors their property rights in their works" and that as a consequence there was a "strong desire of the framers to include a copyright clause in the Federal Constitution."[60] Three years later, the Congress, authorized by the Copyright Clause in the Constitutional, proclaimed the fist Copyright Act of United State.

After the enactment of Federal Copyright Act, there were debates on the character of the copyright, arguing about whether it is a "nature right" or a "statutory right." The Supreme Court solved those debates by declaring in the influential case *Wheaton v. Peters*,[61] "[t]hat an author, at common law, has a property in his manuscript, and may obtain redress against any one who deprives him of it, or by improperly obtaining a copy endeavours to realize a profit by its publication, cannot be doubted; but this is a very different right from that which asserts a perpetual and exclusive property in the future publication of the work, after the author shall have published it to the world."[62] Thus ascertained the character of the

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59 *Id*. (citing MARK ROSE, AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT 10 (1993)).

60 Irah Donner, *The Copyright Clause of the U.S. Constitution: Why Did the Framers Include It With Unanimous Approval?*, 36 AM. J. LEGAL. HIST. 361, 362-65 (1992); HOWARD B. ABRAMS, THE LAW OF COPYRIGHT § 1.01, at 1-2 (2000). *But see* Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution*, 2 J. INTELL. PROP. L. 1, 24 (1994), Walterscheid thinks Donner's description overstates the reality.

61 *See* Wheaton v. Peters, 33 U.S., 8 Pet. 591 (1834) (enhance added).

62 *Id*. at 657.

copyright is “statutory right.”

On the basis of the decision of *Wheaton*, in the legislative history of Copyright Act of 1909, U.S. Congress confirmed that copyright is statutory right: “The enactment of copyright legislation by Congress under the terms of the Constitution is not based upon any natural right that the author has in his writings, for the Supreme Court has held that such rights as he has are purely statutory rights, but upon the ground that the welfare of the public will by securing to authors for limited periods the exclusive rights to their writing.”[63] Hereafter, the character of statutory right has been the root of the formwork of the Unite State Copyright.

2.1.2 The History Background of Fair Use Doctrine

Professor Zechariah Chafee once mad a celebrated dictum: “The world goes ahead because each of us builds on the work of our predecessors. A dwarf standing on the shoulders of a giant can see farther than the giant himself.”[64] To progress any given kind of learning or science needs to repeatedly examine related theories and foundations previously established. The granted exclusive copyright rights may nevertheless obstruct the study of compare and analysis, or the creation of new ideas upon preceding viewpoints. As a result, the concept of fair use doctrine emerged as a bridle to restrict copyright holders’ exclusive right in an appropriate degree, thus ensure later generations can legitimately exploit existent copyrighted works in a reasonable range without constituting infringement.

From the beginning of the enactment of Statute of Anne, fair use doctrine –

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63 *See* ABRAMS, *supra* note 60, § 1.02[B], at 1-13 (citing the Judiciary Committee of the House of Representative in its Report accompanying the comprehensive revision of the Copyright Act in 1909. H. R. Rep. No. 2222, 60th Cong., 2d Sess. 7 (1909)).

64 Pierre N. Leval, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1109 n.21 (1990) (citing Zechariah Chafee, Jr., *Reflections on the Law of Copyright*, 45 COLUM. L. REV. 503, 511 (1945)).

named as "the doctrine of fair abridgment" at that time,[65] has gradually developed by the British Equity Courts following the legislate goal of Statute of Anne: "encouragement of learning."[66] "[T]he origin of the fair use doctrine is closely connected to abridgments, and early cases went so far as to suggest that an abridgment always constitutes fair use, at least one that is 'a real and fair abridgment' displaying 'the invention, learning, and judgment' of the abridger, and not merely an instance of a work that has been 'colourably shortened.'"[67] In the 1803's case of *Cary v. Kearsley*, Lord Ellenborough stated: "That part of a work of one author is found in another, is not itself piracy, or sufficient to support an action; a man may fairly adopt part of the work of another; he may so make use of another's labors for the promotion of science, and the benefit of the public. ... While I shall think myself bound to secure in every man the enjoyment of his copyright, one must not put manacles on science." [68] By keeping the scope of the copyright monopoly in check, fair abridgment represented one avenue of ensuring that copyright encouraged, rather than hampered, knowledge and learning.[69]

Same with the Britain, the United States is a country with common law legal institutions, the fair use doctrine in the U.S. too is a common law doctrine accu-

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65 *See* Lydia Pallas Loren, *Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1, 13 (1997).

66 *See* WILLIAM F. PATRY, INTERNATIONAL COPYRIGHT LAW AND PRACTICE 718 (2001).

67 Twin Peaks Productions, Inc. v. Publications Intern., Ltd., 996 F.2d 1366, 1375 (2d Cir. 1993) (quoting Gyles, 26 Eng. Rep., at 490). *See also* Matthew W. Wallance, *Analyzing Fair Use Claims: A Quantitative and Paradigmatic Approach*, 9 ENT. & SPORTS L. REV. 121, 124-25 (1992).

68 William F. Patry, Fair Use and Fair Abridgment (Oct. 14, 2005), *available at* The Patry Copyright Blog, http://williampatry.blogspot.com/2005/10/fair-use-and-fair-abridgment.html (last visited Dec. 5, 2007) (citing Cary v. Kearsley, 4 Esp. 168) (1803).

69 *See* Loren, *supra* note 65, at 15.

mulated from precedents. Justice Story's opinion in *Folsom v. Marsh*[70] is recognized as the first articulation of fair use in the United States: "In short, we must often, in deciding questions of this sort, look to the nature and objects of the selections made, the quantity and value of the materials used, and the degree in which the use may prejudice the sale or diminish the profits, or supersede the objects, of the original work."[71] Following Justice Story's opinion, the lower courts continued to apply Story's formulation of the fair use doctrine. As more rights were added to the rights granted to copyright owners, fair use was asserted more frequently, the amorphous doctrine being termed as an "equitable rule of reason balance,"[72] however, not until 1976 the U.S. Congress largely amended Copyright Act,[73] the fair use doctrine had coded as section 107 of the Copyright Act.[74]

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70 *See* Folsom v. Marsh, 9F. Cas. 342 (C.C.D. Mass. 1841).

71 *Id.* at 348.

72 Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 448 (1984).

73 *See* H.R. Rep. No. 1476, 94th Cong., 2d Sess. (1975).

74 Limitation on Exclusive Right: Fair Use, § 107 (2007).

Notwithstanding the provision of section 106 and 106a, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by the section, for purpose such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purpose;

(2) the nature of copyrighted work;

(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

(4) the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors. (As amended, Pub. L. 101-650, 104

2.1.3 The Ultimate Goal of Copyright Law and Fair Use Doctrine

As stated in the Copyright Clause: "The Congress shall have the power … to Promote the Progress of Science and useful Art, by securing … to Authors and Inventors the Exclusive Right to their … Writings and Discoveries."[75] The general goal of Copyright Clause has been to establish an incentive for authors to create, by providing them an avenue for obtaining remuneration. The ultimate goal is not author remuneration, however, but the advancement and dissemination of culture and knowledge.[76] "In enacting a copyright law, Congress must consider…two questions: First, how much will the legislation stimulate the producer and so benefit the public, and second, how much will the monopoly granted be detrimental to the public? The granting of such exclusive rights, under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly."[77]

The Supreme Court has frequently stressed that the public interest in generating and disseminating original works is the ultimate goal of the Copyright law: "The economic philosophy behind the [Copyright] clause empowering Congress to grant patent and copyright is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare."[78] "The pri-

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Stat. 5089 (1990); Pub. L. 102-492, 106 Stat. 3145 (1992)).

75 *See* U.S. Const. art. 1, § 8 cl. 8.

76 *See* 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, 1601 (1982) [hereinafter Gordon, *Fair Use as Market Failure*].

77 *See* ABRAMS, *supra* note 60, § 1.02[C], at 1-15 (2000) (citing H.R. Rep. No. 2222, 60th Cong., 2d Sess. 7 (1909)); *See also* HALBERT, *supra* note 55, at 26 ("Granting such temporary monopolies over intellectual property was considered a necessary evil").

78 Mazer v. Stein, 347 U.S. 201, 219 (1954).

mary objective of copyright is not to reward the labor of authors, but '[t]o Promote the Progress of Science and Useful Arts.' To this end, copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work."[79] As Justice Stevens explained in *Sony*, the elaborate combination of grants and reservations that comprise the Copyright Act is designed to advance the public welfare by rewarding creative intellectual effort sufficiently to encourage talented people to engage in it, while at the same time making the fruits of their genius accessible to as many people as possible, and as quickly and cheaply as possible.[80]

Courts and commentators have given a variety of formulations as to what sort of "*quid* " will balance the "*quo*" of copyright's statutory monopoly:[81] "The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant ... 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."[82]

Fair use is recognized as one such "*quid*," it seeks to accommodate the author's need for remuneration and control while recognizing that in specific instances the author's rights must give way before a social need for access and use. The common law doctrine of fair use was defined as "a privilege in others than the owner of the copyright to use the copyrighted material in a reasonable manner

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79 Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349-50 (1991) (citations omitted) (emphasis added) (quoting U.S. Const. art. 1, § 8, cl. 8)).

80 *Sony*, 464 U.S. at 431-32.

81 Tom W. Bell, *Fair Use v. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557, 585 (1998).

82 *Sony*, 464 U.S. at 429.

without his consent."[83] Fair use "permits courts to avoid rigid application of the copyright statute, when on occasion, it would stifle the very creativity which the law is designed to foster."[84] In other words, the fair use doctrine enables the judiciary to permit unauthorized uses of copyrighted works in particular situations when doing so will result in wider dissemination of those works without seriously eroding the incentives for artistic and intellectual innovation.[85]

In sum, the ultimate goal of Copyright Law is to promote the progress of science and useful art in two distinct but related ways: First, it seeks to increase both the quantity and quality of creative output. Second, it seeks to broaden public access to creative works.[86] Copyright law does not seek to maximize the financial returns to creators of works or to maximize the absolute number of works created; rather, copyright law in the United States seeks to promote the progress of knowledge and learning. Therefore, granting the monopolistic property right to the authors is for the exchange of the dissemination of knowledge to the public, and the fair use doctrine can ensure this dissemination of knowledge possible, thus "Promote the Progress of Science and Useful Arts."

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83 Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 549 (1985) (quoting H. BALL, LAW OF COPYRIGHT AND LITERARY PROPERTY 260 (1944)).

84 Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994).

85 *Sony*, 464 U.S. at 450-56. *See also* Robert A. Kreiss, *Accessibility and Commercialization in Copyright Theory*, 43 UCLA L. REV. 1, 20 (1995) ("The constitutional goals of copyright are the advancement of learning and knowledge. The means to achieve those ends is the incentive system which induces authors to create and disseminate their works.").

86 Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799, 1801 (2000).

2.2 Basic Conceptions of Economic Analysis of Copyright

2.2.1 The Basic Economic Argument

When discuss the economic rationale of copyright, Professor Robert M. Hurt groups the various justifications offered in favor of copyrights under two headings: (1) those which are based on the rights of the creator of the protected object or on the obligation of society toward him and (2) those which are based on the promotion of the general well-being of society.[87] The first classification can be divided into three theories: (1) the natural property right of a person to the fruits of his creation, (2) the moral right to have his creation protected as an extension of his personality, and (3) his right to a reward for his contribution to society.[88] From the above discussion of the historic background of the copyright, one can find that the development of Anglo-American copyright scheme was irrelative with the first classification – nature right or moral right based rationales,[89] but associate with the second classification: promotion of the general well-being of society, which, as evaluated by Professor Hurt, is necessary supplement to the free market in promoting the best allocation of scarce resources according to the

87 *See* Robert M. Hurt & Robert M. Schuchman, *The Economic Rationale of Copyright*, 56 AM. ECON. REV. PAPERS & PROCEEDINGS 421, 421-22 (1966), *available at* http://www.compilerpress.atfreeweb.com/Anno%20Hurt%20&%20Schuchman%20Econ%20Rationale% 20Copyright.htm (last visited Aug. 27, 2007).

88 *Id.*

89 *But see* Wendy J. Gordon & Robert G. Bone, *Copyright*, *in* ENCYCLOPEDIA OF LAW AND ECONOMICS § 1610, at 191 (Boudewijn Bouckaert & Gerrit De Geest eds., 1999), *available at* http://encyclo.findlaw.com/1610book.pdf (last visited Aug. 21, 2007) (arguing that United States copyright law recently adopted the idea of moral right, though in a much more limited form).

priorities of human wants.[90]

In the notions of economic analysis, the basic purpose of a property system is to ensure that resources are allocated to their highest valued use,[91] in which can achieve the "allocative efficiency."[92] Thus, as a property right, copyright provides the proper degree of protection when it ensures that individuals will produce works of authorship if such production would represent the most highly valued use of their resources.[93] In terms of efficient resource allocation, it makes sense to produce copyrighted work as long as the value attributed to it by users exceeds the social cost of its production.[94]

Copyright promotes optimal production, and thus economic efficiency, of copyrighted works by "[t]rad[ing] off the costs of limiting access to a work against the benefits of providing incentives to create the work in the first place. Striking the correct balance between access and incentives is the central problem in copyright law. For copyright law to promote economic efficiency, its principal

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90 *Id.* at 425.

91 Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 579 (1996) [hereinafter Lunney, *Incentives-Access Paradigm*].

92 Allocative efficiency is typically reserved for considerations of whether an industry is producing the "right" amount of a specific good or service. *See* JEFFEREY L. HARRISON, LAW AND ECONOMICS IN A NUTSHELL 29 (2d ed. 2000).

93 *See* Lunney, *supra* note 91, at 489. The most efficient allocation of resources is obtained when markets are competitive; in other words when prices are determined by demand and supply and fully reflect the cost of producing a good, its opportunity costs, and society's valuation for the good as well as other uses of the same resources. *See* ANDREW B. WHINSTON, DALE O. STAHL & SOON-YONG CHOI, THE ECONOMICS OF ELECTRONIC COMMERCE 5-1 (1997), *available at* http://crec.mccombs.utexas.edu/works/ebook/ec05.pdf (last visited Aug. 28, 2007).

94 When an input is used to produce one good, the "social cost" is the value placed on the use of the input in the production of other goods. *See* HARRISON, *supra* note 92, at 29.

legal doctrines must, at least approximately, maximize the benefits from creating additional works minus both the losses from limiting access and the costs of administering copyright protection."[95]

The commonly implemented economic analysis of copyright is welfare economic,[96] which has two major streams:[97] the first one focuses on the welfare tradeoffs between the incentives created by property rights and the social costs of enforcing rights – both the costs of administering the system and the costs of losing access to information at its marginal cost of zero.[98] The second stream focuses on the signaling effect of property rights – whereby consumers signal producers what innovations or information goods are most valuable. This argument focuses on private parties' advantage in reaching efficient tradeoffs between incentives and access using property-based contracts.[99] A central difference be-

95 *See* Landes & Posner, *supra* note 4, at 326.

96 Welfare economics explores how the decisions of many individuals and firms interact to affect the well-being of individual. *See* COOTER & ULEN, *supra* note 1, at 39. Apply this concept to the Intellectual Property area, "individuals" referring to "users", and "firms" referring to "information providers".

97 *See* Yochai Benkler, *Intellectual Property and the Organization of Information Production*, 22 INT'L REV. L. & ECON. 81, 82 (2002).

98 This tradeoff is often seen as involving 1) static losses: in consumption of existing information offered at an above-marginal cost price sufficient to compensate producers; 2) dynamic gains: through incentives to invest in production; and 3) dynamic loss: added by the effects on second generation producers who use information as an input into their own productive enterprise. *See id.* This stream is rooted in the work of Benkler, *supra* note 97, at 85 nn.4 & 5 (citing 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 (Richard R. Nelson ed. 1962), and WILLIAM D. NORDHAUS, INVENTION, GROWTH, AND WELFARE: A THEORETICAL TREATMENT OF TECHNOLOGICAL CHANGE (1969)).

99 Benkler, *supra* note 97, at 83.

tween these two streams is that the first treats limitations on rights – like fair use – as inherent elements in fine tuning rights to achieve optimal protection, while the second justifies such limits only insofar as necessary to overcome market failures – primarily those based on transaction costs.[100]

2.2.2 The Basic Economic Terminology and Conceptions Apply to Copyright

In order to employ an economic approach to analyze the fair use doctrine, there are some basic economic conceptions must be comprehended. The first and most significant conception is that intellectual property is a "public good." A public good is a commodity with two very closely related characteristics: (1) nonrivalrous consumption: consumption of the good by one person does not leave less for any other consumer; and (2) nonexcludability: the costs of excluding nonpaying beneficiaries who consume the good are high.[101] The value of public goods is the individual satisfactions afforded by them, just as with private goods.[102] Therefore, the difference between public and private goods is the technical characteristics of their supply (non-exclusion and non-rivalry), not by non-individual values.[103]

The technical character of public goods obstructs the use of bargaining to achieve efficiency. People who do not pay for their consumption of a public good are called "free riders." Because of "free riders," not enough money will be put in creation, so the information providers will provide fewer information than effi-

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100 *Id.*

101 *See* COOTER & ULEN, *supra* note 1, at 42.

102 Robert D. Cooter, *The Best Right Laws: Value Foundations of the Economic Analysis of Law*, 64 NOTRE DAME L. REV. 817, 825 (1989).

103 *Id.*

ciency requires.[104] This is because, "while the cost of creating a work subject to copyright protection is often high, the cost of reproducing the work, whether by the creator or by those to whom he has made it available, is often low."[105] If creators must invest substantial money in producing a work but cannot efficiently exclude non-payers, they may not reap the value of their efforts. Free-riding may reduce incentives for investment in creation, and producers would under-supply information.[106] In other words, when the market is not protected from pirates who do not share the initial cost of developing the product, authors have a reduced incentive to develop a product, at least for commercial reasons.

Copyright law overcomes this difficulty and encourages creation by providing creators with a legal right to exclude others. It allows copyright owners to use the power of the federal government to exclude non-payers and to deter potential free-riders.[107] As stated by Supreme Court, grant copyright to the author is to "secur[ing] a fair return for an author's creative labor and stimulat[ing] artistic creativity for the general public good."[108] By legally excluding non-payers, the law allows creators to collect fees for the use of their works and secure a return

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104 *See* COOTER & ULEN, *supra* note 1, at 106-08 (explaining the difference between "private good" and "public good.").

105 *See* Landes & Posner, *supra* note 4, at 326.

106 *Id.* at 326-27 (explaining the cost of producing a copyrighted work including the "cost of expression," and the cost of distributing. If the expect return did not expected the cost, then a new work would not be created). This result suggests the need for governmental intervention in the market for information. The governmental intervention has two ways: 1) governmental supply of information or 2) governmental subsidization of private provision of information, either directly from general governmental revenues or indirectly through the tax system. *See* COOTER & ULEN, *supra* note 1, at 109.

107 *See* Niva Elkin-Koren, *Copyright Policy and the Limits of Freedom of Contract*, 12 BERKELEY TECH. L.J. 93, 99 (1997).

108 Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).

on their investment, that is to say, by granting a monopoly power in the form of copyrights, society's intention is to protect an author's market from being eroded or stolen by others. "Economists justify copyright as a way to overcome the public-goods/free-rider obstacle to information production and distribution and to facilitate efficient market transactions that transfer information to its highest valued use."[109]

However, copyright protection involves a "deadweight loss":[110] the owner's ability to exercise monopoly power allows it to set the price for works at a level greater than the marginal cost of a copy. Consequently, potential purchasers who value the work at more than its marginal cost, but less than its monopoly price, will not purchase it, leading to the deadweight loss. As observed by Gordon and Bone: "From an *ex ante* perspective, the nonexcludability feature of information means that a legal monopoly may be necessary to induce creation. But from an *ex post* perspective, the inexhaustibility feature means that any such monopoly will create some social loss."[111] In other words, while copyright law is designed to

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109 Gordon & Bone, *supra* note 89, at 190.

110 Deadweight loss is a net loss in social welfare that results because the benefit generated by an action differs from the foregone opportunity cost. This is usually the combination of lost consumers' surplus and lost producers' surplus, and indicates of the inefficiency of a situation. Deadweight loss is commonly illustrated by a market diagram if the quantity of output produced results in a demand price that exceeds the supply price. The triangle formed by the demand curve above, supply curve below, and quantity to the left is the area of deadweight loss. If demand price equals supply price, this triangle disappears and so too does the deadweight loss. *See* the definition provided by the website "AmosWEB is Economics: *GLOSS* arama*", *available at* http://www.amosweb.com/cgi-bin/awb_nav.pl?s=gls&c=dsp&k=deadweight+loss (last visited Aug. 27, 2007).

111 Gordon & Bone, *supra* note 89, at 194. They identified three other costs of copyright: chilling of future creativity; transaction costs of licensing; and costs of administration and enforcement. *See id*. at 194-96.

remedy the market failure of the public good, it causes another type of a market failure by creating a monopoly pricing above marginal cost.[112] Although some economists show that an efficient result can be achieved with exclusion when the supplier of the inexhaustible good has perfect information about consumer preferences and can perfectly price-discriminate,[113] but as shown in the following analyses, adopting price-discriminate scheme in dissemination of copyrighted works can not achieve the ultimate goal of copyright law.

3. THE BALANCE OF THE COPYRIGHT – FAIR USE DOCTRINE

To analyze the copyright system economically, scholars have developed several approaches to justify the existence of fair use. First, in the "Market Failure Approach,"[114] "fair use should be interpreted as a mode of judicial response to market failure in the copyright context, and that the presence or absence of the indicia of market failure provides a previously missing rationale for predicting the outcome of fair use cases."[115] That is, fair use justified only when the presence of market failure – especially the prohibiting high transaction cost – exist. Sec-

112 *See* Elkin-Koren, *supra* note 107, at 99.

113 *See, e.g.*, Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293, 293-306 (1970); William W. Fisher Ⅲ, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1659 (1988) [hereinafter Fisher, *Reconstructing Fair Use*].

114 There are four sources could be defined as Market failure: 1) Monopoly and Market Power; 2) The existence of externalities (the benefits of an exchange spill over onto other parties than those explicitly engaged in the exchange) which enjoyed by the "free riders" (under the characters of "public good," free riders are the parties who hope to benefit at no cost to themselves from the payment of others.) 3) Public good; and 4) Severe informational asymmetries. *See* COOTER & ULEN, *supra* note 1, at 40-43.

115 *See* Gordon, *supra* note 76, at 1605.

ond, in the "Efficiency Maximum Approach," fair use could be justified because, in a monopolistic market of copyrighted works, allowing some kinds of "unauthorized use" can maximize the efficiency. To identify whether a use is "fair" requires ranking and comparing all possible uses of the particular work. In these two approaches, licensing of copyrighted works is encouraged because it strengthens the ability of the creator to generate revenue by licensing particular uses, and because it promotes the generation and distribution of creative works that otherwise might not exist. Finally, in the "Balance Approach," the justification of fair use is to balance the incentive for creation and the public interest in accessing the copyrighted works. In this approach, fair use can be justified because it can achieve the allocative efficiency of creative works.

3.1 Market Failure Approach

3.1.1 Market Failure as Justification of Fair Use

Market failure approach is developing from a presumption that in a perfect competition marketplace,[116] individual transactions serve both social needs and the needs of the individual persons participating. A person's willingness to pay to

[116] There are three perfect market conditions, or "conditions of perfect competition," that must be satisfied to result in an efficient solution. *See id.* at 1607. First, all cost and benefits must be borne by the persons within the transaction and not by persons external to it. *See id.* (indicating that "external benefits" may affect a resource user's "willingness to pay for the resource" and "might understate his ability to use the resource in a way that serves social needs"). Second, perfect market conditions also "require perfect knowledge; for example, consumers must know the qualities and characteristics of all available products, as well as the price and locations of the various sellers." *See id.* at 1607-08. Finally, perfect market competition requires the absence of transaction cost. *See id.* (noting that "it must be costless to obtain knowledge, locate all persons affect by a transaction, bargain over process and terms, and maintain an enforcement mechanism to ensure adherence to the bargain").

use the resource reflects "social benefit" since each person is a member of society, so that voluntary transfers between individuals will create a socially desirable pattern of resource allocation.[117] In this way, value, defined as "human satisfaction as measured by aggregate consumer willingness to pay for goods and services," will be maximized.[118] "Fair use is one label courts use when they approve a user's departure from the market."[119] As suggested by Professor Gordon, fair use should be awarded to the defendant in a copyright infringement action only when the market failure exists.

In Professor Gordon's view, fair use doctrine has three straight-forward concerns: where (1) defendant could not appropriately purchase the desired use through the market; (2) transferring control over the use to defendant would serve the public interest; and (3) the copyright owner's incentives would not be substantially impaired by allowing the user to proceed, courts have in the past considered, and should in the future consider, defendant's use "fair."[120] To analyze when fair use is appropriate therefore should begin at identifying when flaws in the market might make reliance on the judiciary's own analysis of social benefit appropriate.[121]

3.1.2 The Three-Step Test

To evaluate market failure, Professor Gordon provides a three-part test to analyze all fair use cases. The first prong of the test requires a court to evaluate the market and determine if a reason to mistrust it exists.[122] "[A]n economic

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117 *Id.*
118 *Id.* at 1606.
119 *Id.* at 1614.
120 *Id.* at 1601.
121 *Id.* at 1614.
122 *Id.*

justification for fair use exists only when the possibility of consensual bargain has broken down in some way."[123] Professor Gordon suggests that both the impossibility or difficulty in achieving a market bargain,[124] and existence of externalities, nonmonetizable interests, and noncommercial activities,[125] provide the causes of mistrust the market. When identifying the market failure, the most significant one is transaction cost.[126] In the economic term, transaction costs includes (1) search costs; (2) negotiation costs; and (3) enforcement costs.[127] In some cases, it is impossible to locate who and where the author is; even when the author is known, to negotiate over the price and terms of the use is expensive and time consuming.[128] If one of the parties didn't perform the negotiated results, to enforce the contractual obligation would raise an additional cost. Because of these costs, the copyrighted work market can not always provide a social desirable pattern for voluntary bargaining.

In the second part of the test, a court should determine whether "the transfer to the defendant is value-maximizing, as determined by weighing plaintiff's injury against defendant's social contribution."[129] When a court weighs plaintiff's loss against the benefit of defendant's use, it is making a comparison similar to

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123 *Id.*

124 *Id.* at 1627-30.

125 *Id.* at 1630-32

126 *Id.* at 1628 (explaining that "As long as the cost of reaching and enforcing bargains is lower than anticipated benefits from the bargains, markets will form. If transaction costs exceed anticipated benefits, however, no transactions will occur.").

127 *See* COOTER & ULEN, *supra* note 1, at 88.

128 This is so called "tracing cost": before using copyrighted work, the user must trace the owner and obtain permission. *Id.* at 136.

129 *See* Gordon, *supra* note 76, at 1626. *See also id.* at 1615 (explaining that "If, when the 'market failure' were cured, the price that the owner would demand is lower than the price that the user would offer, a transfer to the user will increase social value.").

that made by the participants in market transactions. By which, fair use implies the consent of the copyright owner by looking to whether the owner would have consented under ideal market conditions.[130] Market failure creates such an exigency because, when market failure is present, it is impossible or undesirable to make dissemination of creative works, which depends solely on actual consent.[131] Thus, where transfers will not occur because of market failure, courts should ask what the copyright owner would have consented to if he and the user had bargained in a functioning market situation.[132]

Finally, if the first two conditions are satisfied, the court should determine whether a fair use would cause the copyright owner substantial injury.[133] If not, fair use should be awarded to the defendant.[134] In the complete market failure situation, where no incentive purpose would be served by giving plaintiff protection, and where no disincentive would be created by allowing defendant free use, logic suggests that the courts should then allow fair use.[135] However, in the intermediate cases of market failure, where the market cannot be relied upon to generate all desirable exchanges, but where some such transactions would be possible, finding a use fair may result in some injury to relevant incentives because, for some users, fair use would substitute for purchase.[136]

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130 *Id.* at 1616.

131 *Id.* at 1617.

132 *Id.*

133 This injury is referring to the lost revenue for the uses of a copyrighted work. *See id.* at 1651 ("[T]he economic approach to fair use presented in this article [Gordon, *supra* note 76] begins with the premise that a copyright owner is ordinarily entitled to revenue for all substantial uses of his work within the statutorily protected categories.").

134 *Id.* at 1618-22.

135 *Id.* at 1618.

136 "In instances of intermediate market failure, both enforcement (a finding of infringement)

Going through the three-step test suggested by Professor Gordon, one can find that the main point of this market failure approach is: to determine whether a use is fair, courts should mimic the transaction which would occur in the perfect market. If the voluntary bargaining between the copyright owner and the user is possible, then courts should encourage the voluntary bargaining, rather then find a fair use. In summary, if the transaction cost is prohibitively high, and the courts can assume the copyright owner would consent in the absence of market barriers, and most importantly, that the finding of fair use would not serious injure the copyright owner's incentive, then the existence of fair use is justified.[137]

Following this approach, one could say that if no market failure exists, i.e., if the prohibited high transaction cost is no longer considered as a barrier, then there will have no justification for the existence of fair use. That is because, in the perfect market, voluntary transactions will arise between rational, self-interested individuals, and thus create a socially desirable pattern of resource allocation which naturally maximizes society's output based on the available resources. In the other word, there would be no justification for intervention – such as compelling transactions, i.e., fair use – to exist.

3.2 Market Failure Revised

Since the original article "*Fair Use as Market Failure: A Structural and*

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and nonenforcement (a finding of fair use) have dangers. The danger from enforcement is that desirable transfers may be prevented. The danger from giving fair use is that incentives may be undermined." *See id.* at 1618-19.

137 One may observed, this presumption is based upon Coase theorem, which states: "When transaction costs are zero, an efficient use of resources results from private bargaining, regardless of the legal assignment of property rights." To the contrary, "when transaction costs are high enough to prevent bargaining, the efficient use of resources will depend upon how property rights are designed." *See* COOTER & ULEN, *supra* note 1, at 85.

Economic Analysis of the Betamax Case and Its Predecessors" first published in 1982,[138] Professor Gordon has received numerous endorsements and criticisms.[139] She the way the market failure approach has "grown-up, or rather grown-down,"[140] since the publication of her original piece. "It has [] become standard to cite me for that limiting proposition, and to suggest, further, that my logic could lead to eliminating fair use where transaction costs between owner and user became low enough that negotiations can occur."[141]

3.2.1 Excuse and Justification

3.2.1.1 Summary

To clarify that her "goal [of promoting market failure approach] was not to limit fair use, but quite the opposite,"[142] Professor Gordon amended her original approach twenty years later, and suggested that fair uses cases can be separated into two categories of market failure, which she named as "market malfunction" and "market limitation."[143] Where either market malfunction or market limita-

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138 *See supra* note 76.

139 Some comments noticed by herself such as Bell, *supra* note 81; and counter-arguments to Bell: Glynn S. Lunney, Jr., *Fair Use and Market Failure: Sony Revisited*, 82 B.U. L. REV. 975 (2002) [hereinafter Lunney, *Sony Revisited*]; 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 (1997); Loren, *supra* note 65; Cohen, *supra* note 86. *See* Wendy J. Gordon, *Market Failure and Intellectual Property: A Response to Professor Lunney*, 82 B.U. L. REV. 1031, 1031 n.4 (2002) [hereinafter Gordon, *Response to Professor Lunney*].

140 *Id.* at 1034.

141 *Id.* at 1031 (foot note omitted.) She wasn't happy to see her Market Failure Approach has been ill-interpreted as "copyright's 'fair use' doctrine is to see fair use as responding to high transaction costs between copyright owner and user." *Id.*

142 *Id.* at 1032.

143 Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Commodification and*

tion is present, as market failure in the old approach, the market can not be trusted to function as socially satisfactory institutions for the distribution of resources.[144]

Briefly stated, "Market Malfunction," which corresponds to the existing legal concept of "excuse," identifies instances where economic norms appropriately govern, but there is a failure of perfect market conditions.[145] On the other hand, "Market Limitation," which corresponds to the concept of "justification," identifies instances where market norms themselves fail to provide suitable criteria for resolving a dispute.[146] When apply to fair use analysis, the most important difference between "malfunction" and "limitation" is – in the aspect of corresponding concepts: "In cases of 'excuse,' fair use should and does disappear if, because of institutional or technological change, the excusing circumstances disappear. By contrast, in cases of 'justification' a change in circumstances would not change the availability of the fair use defense."[147]

Market Perspectives, *in* THE COMMODIFICATION OF INFORMATION: SOCIAL, POLITICAL, AND CULTURAL RAMIFICATIONS 1, 2 (Neil Netanel & Niva Elkin-Koren eds., 2002), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=293690 (last visited Dec. 12, 2007) [hereinafter Gordon, *Excuse and Justification*].

144 *Id.*

145 *Id.*

146 *Id.* As explained by Professor Gordon, "a potential 'excuse' arises when something occurs that we do *not* want to have emulated but which we allow without imposing liability because of the particular facts of that case." *Id.* at 4; and "[a] case of 'justification' can occur when we would not object if others emulated a defendant's lack of permission and/or lack of compensation." *Id.*

147 *Id.* at 5. Professor Gordon recommend: "a copyright court in the presence of high transaction costs might *excuse* the defendant, but if the transaction-cost problem were eliminated, would *want* the defendant to proceed through the market." *Id.* at 9. But "where non-economic values are at stake … even if market conditions were perfect, it would be normatively appropriate to proceed outside the market's ordinary process of consent and payment…. In such a case, because the inherent limitations of the market prevent it from

In this new article, Professor Gordon made a lot of efforts to separate which fair use case should be justified form which is excused. “[T]he whole point of singling out “justifications” is to help us see the occasions on which judges give fair use because economics is not the proper metric,”[148] consequently, she reconsider the third prong of her three-step test set in the original Market Failure Approach – substantial injury to the copyright owner, instead of precluding fair use in all cases, “in cases of ‘justification,’ we sometimes tolerate such injury in pursuit of other goals.”[149]

Commentators customarily associate Market Failure Approach with curable transition cost,[150] as professor herself put in this way: ”[]whether through collecting societies, technological devices, or otherwise[], the increased ease in transacting should and does result in a lessened availability of the fair use defense.”[151] However, these curable situations only occur in cases of “excuse” in the new approach. In cases of limitation, “it is hard to see any factual change that could pull a decision from a non-market to a market sphere.” [152] By stressing that most cases of fair use are premised on factors other than transaction-cost barriers,[153] Professor Gordon is unwilling to take the blame that, when transaction cost been largely reduced by technology measures or collecting societies, apply-

implementing desired values, justification may appear.” *Id.*

148 *Id.* at 42.

149 *Id.* “As Neil Netanel has pointed out, the third prong of the test effectively forces all inquiries to be subordinated to the economic. Yet there are instances where noneconomic values will be more important – a possibility for which the substantial injury hurdle leaves no scope.” *Id.*

150 Such as the analysis set above by this author. *See supra* 2.1.

151 *See* GORDON, *supra* note 143, at 43 & n.116.

152 *Id.* at 44.

153 *Id.*

ing original and/or revised Market Failure Approach will lead to eliminate fair use doctrine in the digital era.[154]

3.2.1.2 Fruitless Endeavors

Comparing with the original Market Failure Approach, the revised one hasn't improve much. Although Professor Gordon forges ahead in reconsidering the monetary-toward third prong of her three-step test,[155] however, besides admitted that "there is something money can't buy,"[156] the outcome of this amendment limits its own scope of application to the fair use cases. Separating "market limitation" from "market malfunction" in the first prong of test – identifying the existence of market failure – suggests that, on the one hand, "limitation" can end its process in the second prong of the test, the transfer to the defendant is value-maximizing – a cost-benefit valuation;[157] on the other hand, "malfunction" still has to go through the third prong of original test, finding fair use wouldn't cause substantial injury to the author – a monetary valuation.

Following the suggestion set above, the new market failure approach appears fruitless or even redundant. For cases of "market limitation," which essentially not suppose to be dealt in the market,[158] "even if market conditions were perfect, it would be normatively appropriate to proceed outside the market's ordinary

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154 *Id.* at 44-45.

155 *See supra* 3.1.2.

156 *See* Professor Gordon her own discussion about "pricelessness effect", GORDON, *supra* note 143, at 39-42.

157 *See supra* note 129.

158 As Professor Gordon herself points: "where non-economic values are at stake, we might feel very uneasy trusting that market transactions could achieve the desired goals." *See* GORDON, *supra* note 143, at 10. In such situations, "going outside the market is a first-best solution." *Id.*

process of consent and payment."[159] In this regard, market failure approach does no help at all.[160] To the contrast, in the cases of "market malfunction," all the discussions about curable market failure – decreasing transaction cost may lead to eliminate fair use doctrine[161] – inevitable will raise again. Furthermore, as observed by Professor Gordon herself: "[I]t must be stressed that most cases of fair use are premised on factors *other than* transaction-cost barriers that keep copyright owner and potential licensee apart."[162] If we consolidate all points set above, market failure approach not works for cases where finding fair use is justifiable. However, even in cases where market failure approach is useful to decide whether finding fair use is excusable, because "many cases of excuse contain facts that are inextricably intertwined with non-economic normative judgments," other valuations still have come into play. In this regard, market failure approach could be redundant.

3.2.2 Copyright Scope and Doctrinal Efficiency

For the purpose of assess specific doctrinal recommendations, namely Market Failure Approach and Cost-Benefit Approaches of fair use analyses,[163] Pro-

159 *Id.*

160 Indeed, as in case of refusal-to-license, "simply describing the copyright owner's motives as 'noneconomic' is not analytically useful by itself." *See* Matthew J. Sag, *Beyond Abstraction: The Law and Economics of Copyright Scope and Doctrinal Efficiency*, 81 TUL. L. REV. 187, 234 (2006).

161 Through out this new article, Professor Gordon doesn't provide any example of excusable cases other then "high transition cost". *See* GORDON, *supra* note 143, at 3 nn.3, 4, 9, 22, & 52.

162 *Id.* at 44-45.

163 In order to make the transition from abstract theory to practical implementation, Professor Sag develops a set of metrics, see *infra* note 168-70, to assess three specific law and economics approaches to copyright's fair use doctrine, which are exactly the three picked by

fessor Sag develops 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.[164]

Briefly, the scope of an individual copyright can be defined, in economic terms, "as the extent to which its owner can use copyright law to impose costs on third parties or exclude them from certain markets altogether."[165] And the efficiency of an individual copyright doctrine "is determined by the extent that a change in its scope benefits first-generation authors more than it costs second-generation authors for a given level of copyright scope.[166] Evaluating specific doctrinal recommendations, Professor Sag suggests, "we need to assess both the effect on copyright scope in general and the specific costs and benefits of the doctrinal formulation in particular."[167]

Analyzing the copyright scope and doctrinal efficiency generates a set of metrics, which, in turn, is useful for analyzing a doctrinal theory:[168]

1. Does the theory take account of the role of private ordering in determining the ideal scope of copyright?[169]

2. Is the theory doctrinally efficient?

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this author: Gordon's "Market Failure Approach," Fisher's "Efficiency Maximum Approach," and Lunney's Balance Approach.

164 *See* Sag, *supra* note 160, at 192.

165 *Id.* at 199.

166 *Id.* at 219.

167 *Id.* at 218.

168 *Id.* at 226.

169 In Professor Sag's analysis, the net welfare effects on 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." *Id.* at 224.

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?[170]

3.2.2.1 Apply to Market Failure Approach

The evaluation of Professor Sag's economic model would not be discussed for the present. Going through the set of metrics, Professor Sag observes some convincing weaknesses of Market Failure Approach. Nevertheless, he validates that Market Failure Approach, with some improvements, is an acceptable economic model for the determination of fair use.[171]

Under the first prong of the metrics, Sag identifies that "the requirement that the defendant prove the existence of market failure as a prerequisite for a finding of fair use tilts this apparently neutral framework decidedly in favor of the copyright owner."[172] Besides, manifold obstacles to market perfection may simultaneous exist, the defendant have to further prove that these obstacles "are of a sufficient degree to constitute a market failure."[173] This difficulty of proving the existence of market failure is much severer in the cases of less tangible causes of market failure such as externalities or noneconomic motivations: "the market-

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170 Professor Sag argues: "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." *Id.*

171 "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." *Id.* at 237.

172 *Id.* at 231.

173 "[M]erely identifying the existence of one or more potential causes of market failure will never be sufficient; the defendant must establish that these market imperfections are of a sufficient degree to constitute a market failure." *Id.* at 232-33.

failure approach itself gives little guidance as to what degree of positive externalities or noneconomic motivations might justify the application of fair use."[174]

To overcome this difficulty, Professor Sag suggests that game theory, behavioral economics, and price theory can be useful in assessing the efficiency of private ordering.[175] In sum, he concludes, "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,"[176] but a more nuanced approach to allocate the burden of proving the existence of market failure would improve the approach.[177]

Because adopting market failure approach may largely reduce the opportunities of finding fair use, which in turn, reduce the cost of administration, market failure approach passes the second prong of the metrics – doctrine efficiency.[178] Yet, because market failure approach implicitly assumes that the copyright owner's rights are absolute, unless modified with a more nuanced approach to allocate the burden of proof, adopting market failure approach would constitute a significant expansion of copyright scope.[179] As to the third prong of the metrics, variation in the welfare-scope relationship, Professor Sag states, because market failure approach does account for the efficiency of private ordering – a substantial cause of the variation in the welfare-scope relationship – it passes the test.[180]

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174 *Id.* at 233.

175 *Id.* at 234-35.

176 *Id.* at 235.

177 *Id.*

178 *Id.* at 236.

179 Profess Sag explains, "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." *Id.*

180 *Id.* at 237.

By and large, Professor Sag suggests, with some improvements, market failure approach is an acceptable method for analyzing fair use doctrine.

3.2.2.2 Inevitable Drawbacks

The most significant drawback of market failure approach, as identified by Professor Sag, is it puts the burden of proof on the defendant.[181] Proving the existence of market imperfections is difficult; proving these imperfections accumulate enough to constitute a market failure is even more complicated – especially in cases of "externalities or noneconomic motivations."[182] In this regard, Professor Sag improves market failure approach, by introducing game theory, behavioral economics, and prices theory,[183] to be a more nuanced approach to allocate the burden of proof,[184] however, he did not tell us how to apply these theories, and how a "more nuanced approach" can be processed.

Professor Sag cites a price theory explanation of fair use developed by Ben Depoorter and Francesco Parisi, which enumerates factors courts should take into

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181 This is not the fisrt time for this drawback been identified, Professor Lunney also has emphasized that: "By starting with an assumption that private markets are efficient, the market failure approach shifts the burden to the defendant to establish the existence of market failure as a threshold matter … Moreover, even where a defendant successfully establishes a market failure, the strong preference for market outcomes and the distrust of government intervention (that fair use, but not copyright itself, somehow represents) remain, limiting the availability of the fair use 'defense.'" *See* Lunney, *supra* note 139, at 992.

182 *See supra* text accompanying note 171-73.

183 All these three economic terminologies, as showed in Sag's suggestion, refer to one concept: anticommons. *See* Sag, *supra* note 160, at 234-35; *See also* Ben Depoorter & Francesco Parisi, *Fair Use and Copyright Protection: A Price Theory Explanation*, 21 INT'L REV. L & ECON. 453, 459-62 (2002). "The anticommons equilibrium pricing is in fact the outcome of a prisoner's dilemma problem that the individual copyright sellers face when pricing their copyrights independently from one another." *Id*. at 462.

184 *See supra* text accompanying note 175-77.

account when valuating fair use, including: "(a) the number of copyright holders; (b) the degree of complementarity between the copyrighted inputs; [and] (c) the degree of independence between the various copyright holders."[185] However, in the original article, *Fair Use and Copyright Protection: A Price Theory Explanation,* those variables identified by Depoorter and Parisi were purposed to guide and constrain the application of fair use doctrines,[186] not to illustrate how to allocate the burden of proof in the fair use finding.

Depoorter and Parisi provide an explanation of "Tragedy of the Anticommons": "when multiple owners have the right to exclude others from taking advantage of a scarce resource, and no one has an enforceable privilege of use, the resource might be underutilized."[187] Because copyright holders each pricing their works independently and competitively, due to the strategic behavior, in the case of strict complementarity – ex. copyrighted works which are essential and irreplaceable to the success of a derivative work,[188] copyright owners can impose external costs on the sellers of other complementary inputs, due to the cross-price effects between the goods.[189] Conversely, in the case of perfect substitut-

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185 *See* Sag, *supra* note 160, at 234-35 (citing Depoorter & Parisi, *supra* note 183, at 453, 453-54, 463-64).

186 There is a fourth factor lists in Depoorter & Parisi's critical variables that should guide the application of fair use doctrine: "[the copyright owner's] ability to price discrimination." *Id.* at 453-54, 464.

187 *Id.* at 458. "Michelman (1982) coined the term anticommons …, defining it as 'a type of property in which everyone always has rights respecting the objects in the regime, and no one, consequently, is ever privileged to use any of them except as particularly authorized by others.'" (citing F. L. Michelman, *Ethics, Economics and the Law of Property*, *in* NOMOS XXIV: ETHICS, ECONOMICS AND THE LAW 3, 3-40 (J. Roland Pennock & John W. Chapman eds., 1982)).

188 Depoorter & Parisi, *supra* note 183, at 459.

189 "The greater the number of individuals who can independently price an essential input,

ability – ex. less essential sources without compromising the quality and success of the final product,[190] the copyright owner is unable to impose any external cost on the owners of other copyrighted material, due to the Bertrand-type competition between the various sellers.[191]

In conclusion, Depoorter and Parisi state, the failure of the various copyright holders to coordinate prices resulting social deadweight loss.[192] In the case of complementarity, "the competitive Nash equilibrium would generate anticommons pricing, making both society and the individual copyright sellers worse off."[193] On the other hand, in the case of substitutability, the competition between copyright holders will draw their price to the marginal cost which would be detrimental for them.[194] Therefore, "in light of the anticommons insight, fair-use doctrines retain a valid efficiency justification even in a zero transaction-cost environment. Fair-use defenses can be regarded as justifiable and instrumental in minimizing the welfare losses occasioned by the strategic behavior of the copy-

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the higher the equilibrium price that each of these individuals will demand for his own license. At the margin, as the number of copyright holders approaches very large numbers (or infinity), complete abandonment of valuable resources will result." *Id.* at 461.

190 *Id.* at 459.

191 *Id.* at 461. Bertrand competition is a model of price competition between duopoly firms which results in each charging the price that would be charged under perfect competition, known as marginal cost pricing. *See* "Wikipedia, the free encyclopedia", http://en.wikipedia.org/wiki/Bertrand_competition (last visited Nov. 19, 2007).

192 "If the copyrights are in a relationship of complementarity in the production of a derivative work, the competitive Nash equilibrium would generate anticommons pricing, making both society and the individual copyright sellers worse off." Depoorter & Parisi, *supra* note 183, at 462.

193 *Id.* "As in a traditional prisoner's dilemma game, the inability of copyright holders to coordinate prices produces a result that is both privately and socially inefficient." *Id.*

194 *Id.*

right holders."[195]

In sum, although the propose that Professor Sag intruding price theory is to improve market failure to be a more nuanced approach to allocate the burden of proof, however, after surveyed the price theory provide by Depoorter and Parisi, one can find it does not work the way Professor Sag implied, thus it can not help market failure to surmount the most significant drawback identified by Professor Sag – puts the burden of proving the existence of market failure on the defendant.

Nevertheless, the price theory verifies another economic justification for the existence of the fair use doctrine: whenever anticommons costs are serious enough to undermine the viability of the transaction, fair use doctrine is a valuable tool for mitigating the resulting deadweight losses.[196] Furthermore, even in a zero transaction-cost environment such as digital network, "[i]f strategic behavior is not prevented by the ability of users of copyrighted work to 'click and pay' in order to obtain copyright licenses, sub-optimal equilibria may still result from the independent pricing of copyright licenses … In light of this, the defense of fair use retains an important, albeit residual, role in minimizing the deadweight losses."[197]

3.3 Efficiency Maximum Approach

3.3.1 Efficiency Maximum Approach[198]

In the remarkable article "*Reconstructing Fair Use Doctrine*," Professor

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195 *Id.* at 458.

196 *Id.* at 464.

197 *Id.* at 462.

198 In this approach, the ultimate objective is to select the combination of entitlements that will maximize net efficiency. Therefore, for the purpose of this proposal, I would self-righteous call it "Efficiency Maximum Approach."

Fisher suggested another justification for fair use. The primary inquiry is: "What legal rule governing unauthorized use of works of copyrighted materials would yield the combination of production and dissemination of works of the intellect that is most efficient?"[199] And the premise of this approach is that the objective of copyright law in general and the fair use doctrine in particular should be the efficient allocation of resources.[200]

When deciding whether a use of a copyrighted work is fair, Profess Fisher proposes a two-step approach for a judge to proceed in a copyright infringement action. First, the court should determine the optimal levels of copyright protection.[201] By granting artists a type of property right in their products, copyright law provides an incentive for creative persons to create. However, the granting of property right to artists also may make them become monopolist, incurring the transfer of wealth and the deadweight loss.[202]

Under this monopolistic condition, the task of a lawmaker who wishes to maximize efficiency, therefore, is to determine the combination of entitlements that would result in economic gains that exceed by the maximum amount the at-

199 *See* Fisher, *supra* note 113, at 1699. The term "efficient," means "that allocation of resources which could not be improved in the sense that a further change would not so improve the condition of those who gained by it that they could compensate those who lost from it and still be better off than before." *See id.* at 1700. As so defined, Professor Fisher's "efficient" is reference to the "Kaldor-Hicks Efficiency", a type of efficiency that results if the monetary value of society's resources is maximized. Kaldor-Hicks efficiency is a technique commonly used to evaluate the desirability of producing public goods (such as parks, highways, or reservoirs). *See* the definition provided by the website "AmosWEB is Economics", *supra* note 96.

200 *See* Fisher, *supra* note 113, at 1695.

201 *Id.* at 1700-05.

202 *Id.* at 1702.

tendant efficiency losses.[203] Thus, "when the copyright owner's collected monopoly profits from consumers is greater than optimal amounts, a judge could use the fair use doctrine to chip away at that package until it approximated the most efficient combination."[204]

The second step is to rank all kinds of possible use of the work in issue in order to define the appropriate line between fair and unfair.[205] Based upon the presumption that the author is a monopolist,[206] who expects to enjoy all monopoly profit and enjoin all possible infringing uses, the ranking standard is "incentive/loss ratio" – ranged in order of the relative benefits and costs of legitimating the uses. The purpose of the ratio is to provide the judge with a preliminary indication of the net economic benefits of according author the entitlement in question[207] – the higher the ratio, the larger the loss of efficiency, and thus, the less in favor of finding a fair use. To ascertain the most efficient interpretation of the fair use doctrine in this context, the judge need only identify the point in the series of putatively infringing uses where the difference between aggregate efficiency gains and aggregate efficiency losses is greatest.[208] To the point and its left, all uses are unfair; to the right, all uses are fair.

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203 *Id.* at 1703.

204 *Id.* at 1704.

205 *Id.* at 1705-17.

206 The figures in the Professor Fisher's article are drawn based upon a typical monopoly economic model. *See id.* at 1701 n.200, 1708 n.232, 1711 n.240.

207 *Id.* at 1707.

208 The efficiency gains are referred to the increased consumer satisfaction that results when consumer have access to a better menu of copyrighted work. The "better menu" is result form the great incentive award to the author (if find all uses are unfair) and the other actual and potential writers. *See id.* at 1715-17 (noting that "The judge thus must estimate the present value of the change in detective-story writing that would be caused by each increase in the aggregate reward offered to successful writers like Plaintiff.").

3.3.2 Promoting Contractual Price Discrimination Scheme

In his "*Reconstructing Fair Use Doctrine*," which published in 1988, Professor Fisher repeatedly promoted the adoption of "Price Discrimination Scheme," suggesting that "[t]he more that privileging the activity would undermine the ability of copyright owners to engage in price discrimination, the weaker the case for fair use, because price discrimination both increases the rewards available to creators (without increasing monopoly losses) and equalizes consumers' access to works of the intellect."[209]

Empowered by Copyright Law, the author has the exclusive right to make copies of the work,[210] when there are no good substitutes for the work, she becomes a monopolist. If the author wishes to maximize her profits, she will thus charge substantially more than marginal cost of producing additional copies of her work.[211] If an information user wants to use the copyrighted work but only willing or able to purchase that work at a price lower than monopoly price (but higher than marginal price), the result would be that user cannot get access to that work, and thus cause a "deadweight loss" – a loss represents both a failure to satisfy individual preferences and public welfare.[212]

To diminish this deadweight loss, economists have advocated the use of price discrimination scheme. "Price discrimination" means charging different prices to different buyers for the same good. Adopt contractual price discrimina-

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209 *See id.* at 1782.

210 17 U.S.C. § 106(1) (2002).

211 *See* William W. Fisher Ⅲ, *Property and Contract on the Internet*, 73 CHI.-KENT L. REV. 1203, 1234 (1998) [hereinafter Fisher, *Property and Contract*]; Cohen, *supra* note 86, at 1801.

212 *See* Cohen, *supra* note 86, at 1801-02; James Boyle, *Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property*, 53 VAND. L. REV. 2007, 2021-23 (2000); Fisher, *supra* note 211, at 1234-37.

tion scheme onto copyright, economists believe,[213] will promote the consumer welfare, and ensure broader public distribution of creative works at various degrees of price that every individual consumer is willing and able to pay.[214]

The advantage to the seller compared to a uniform sale price is that more revenue would be generated. In the ideal case of perfect price discrimination, every customer is charged her maximum willingness to pay for the items she purchases. The result would be the sharply reduced deadweight loss which mostly transfers to the information providers' pocket. That means, in Professor Fisher's language, "first of all, that social welfare losses have been reduced. In addition, we are getting much more bang for our buck – a much larger incentive for creative activity per unit of social cost."[215] Thus, courts and legislatures, suggested by Professor Fisher, should not only facilitate and reinforce this shift form copyright law to contract law, but should also require that creators (and consumers) when setting up such "private" arrangements abide by restrictions designed to protect the public interest.[216]

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213 *See, e.g., id.* at 1239. (arguing the Price discrimination would lead to substantial improvements in distributive justice – better approximation of the ideal of affording all persons access to works of the intellect); Bell, *supra* note 81, at 561 (advocating the "Fared use" would make copyrighted works in the digital intermedia available under reciprocal quasi-compulsory licenses. Although consumers might have to pay fees that the fair use defense would excuse in other media, they would in return gain better access to better information).

214 *See* Fisher, *supra* note 211, at 1238.

215 *Id.* at 1240.

216 *Id.* at 1203. Engage in price discrimination would produce the following differences from the current copyright regime: 1. It would enable creators to make more money; 2. It would increase the ratio between the incentives for creativity and the concomitant deadweight losses – and thus should enhance net consumer welfare; 3. It would increase the likelihood that all persons would have access to works of the intellect. *Id.* at 1240. Pro-

3.4 The Balance Approach

3.4.1 Fair Use as Balance of Public Interests

Copyright law seeks to balance the level of incentive to create and the interest in maximizing access to information once created. Copyright law does not seek to maximize the financial returns to creators of works or to maximize the absolute number of works created; rather, copyright law in the United States seeks to promote the progress of knowledge and learning.[217] The law thus regulates access to information by balancing incentives to create and accessibility of information. "Copyright monopoly is contingent, instrumental, and limited to the level necessary to provide incentives. It is restricted under the statutory provisions and legal doctrines such as fair use."[218] As pointed out by Professor Lunney, the primary purpose of copyright is "to ensure the public an adequate supply of copyrighted works. … So long as copyright is public-minded, then fair use must, given the public good character of copyrighted works, entail a balancing of the public benefits and losses associated with granting the copyright owner the right to prohibit particular uses."[219]

Supreme Court also frequently states that fair use privilege to the users is to balance the monopoly rights granted to copyright owners. An evaluation of any fair use case "involves 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,

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fessor Bell also argues that allowing copyright owners and consumers to exit copyright law and freely contract under a fared use system in time may reveal a system more beneficial than one preempted by federal copyright law. *See* Bell, *supra* note 81, at 596-600.

217 *See* Loren, *supra* note 65, at 24.

218 *See* Elkin-Koren, *supra* note 107, at 101.

219 *See* Lunney, *supra* note 139, at 996.

and commerce on the other hand."[220] Thus, "[t]he limited scope of the copyright holder's statutory monopoly, like the limited copyright duration required by the Constitution, reflects a balance of competing claims upon the public interest: Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts."[221]

Section 107 of Copyright Act is titled as "Limitation on Exclusive Right: Fair Use,"[222] however, the Congress did not intent to defined what is "fair use," rather, the section 107 is to provide four considerations for courts to determine whether an unauthorized use can be considered as fair.[223] "Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adopt the doctrine to particular situations on a case-by-case base."[224] Thus, beyond these four factors, in an ideal world with perfect information, courts could resolve the fair use issue by comparing the social value of additional authorship resulting from prohibiting a use to the social value of allowing the use to continue.[225] To compare these two conflict values, on one side of the balance, the court should ask if prohibiting a particular use would result in more and better production of copyrighted works. On the other side of the balance, the court should consider what the public stands to lose if the use is pro-

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220 *Sony*, 464 U.S. at 429.

221 *Twentieth Century Music*, 422 U.S. at 156.

222 17 U.S.C. § 107 (2001).

223 These considerations should be esteemed as checklist or magic formula for the correct resolution of a fair use question. *See, e.g.*, *Campbell*, 510 U.S. at 584-85; New Era Publication Int'l. Aps. v. Carol Pub. Group, 729 F. Supp. 992 (S.D.N.Y. 1990), *rev'd in part*, 904 F.2d 152 (2d Cir. 1990), *cert. denied*, 498 U.S. 921 (1990).

224 *See* H.R. REP. No. 94-1476, at 66 (1975).

225 *See* Lunney, *supra* note 139, at 998-99.

hibited.[226] In order to achieve the social welfare maximized, if that particular use can improve the social welfare, then the use should be considered as fair; contrariwise, unfair.[227]

3.4.2 The Three-step Test

Based upon these above inquiries, Professor Lunney provides a three-step "Balancing approach": First, "a court must determine whether the copyright owner has shown 'by a preponderance of the evidence that some meaningful likelihood of [actual or] future harm [to the work's market value] exists.'"[228] If a copyright owner adequately demonstrates that the use will impair the market for or value of the copyrighted work, then she has established her own private interest in having the use declared unfair.[229] However, courts and commentators are over emphasizing the free riding problem in fair use analyses, believe that some consumers are obtaining unauthorized access will necessarily impair the incentives for creating the work. "Yet, free riding on a public good is not analogous to theft of a private good and can indeed prove Pareto optimal."[230]

The second step of this balancing approach "requires a determination of the likely relationship, if any, between that probable reduction and the production of copyrighted works.[231] Professor Lunney argues, Copyright, particularly for entertaining works, has moved from a cost-based system of protection towards a value-based system of protection.[232] Copyright protection no longer serve as a

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226 *Id.* at 999.
227 *Id.*
228 *Id.* at 1000 (citing *Sony*, 464 U.S. at 451.)
229 *Id.* at 1014.
230 *Id.* at 1000-01.
231 *Id.*
232 *Id.* at 1014-15 (explaining that in the nineteenth century, copyright was seeking to ensure

guarantee to ensure that copyright owner can recover the cost of her work. Rather, Copyright in nowadays is to endorse copyright owner that she can seize all values generated by her work, including any opportunity to license her work.[233]

Because these excess incentives for almost all copyrighted works, the relationship between a reduction in the copyright owner's revenue and the production of copyrighted works has sharply attenuated.[234] Therefore, in balancing the competing public interests at stake in a fair use determination, courts today should evaluate more directly the relationship between additional revenues and more or better works, for particular classes of works, based upon the evidence presented and the market structure of the relevant industry. "Once a court has determined the likely relationship between marginal changes in revenue and marginal changes in output, that relationship should become a factor in calibrating the fair use balance."[235] As the likely relationship between incentives and output becomes more attenuated, the copyright owners have to establish more substantial market impairment in order to justify finding the use unfair.[236]

The Final step is to identify the public's interest in allowing the use to continue.[237] Because of the public good character of copyrighted works, "the key fair use question, from an economic perspective, is whether, on balance, society would be better or worse off by allowing the use to continue."[238] To the extent

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an author a fair opportunity to recover the cost of her work. Today, copyright has sought increasingly to protect the copyright owner against the loss of any opportunity to license the work.).

233 *Id.* at 1015.

234 *Id.*

235 *Id.*

236 *Id.* at 1017-18.

237 *Id.* at 1023.

238 *Id.*

that private copying expands access to existing works without decreasing the copyright owner's revenues and the resulting incentive to create additional works, private copying is Pareto optimal and should constitute a fair use.[239] Moreover, even if private copying decreases revenues to some extent and is thus not Pareto optimal, private copying may nevertheless expand access to an existing work substantially more for any given reduction in revenue than would a competitor's copying.[240] "As a result, courts should not presume that private copying has the same economic consequences as copying by a competitor, but should expressly consider the increase in access that the private copying achieves for any given reduction in revenue."[241]

In sum, the balance approach is based upon a case-by-case basis, comparing and then choosing between the values generated by prohibiting a particular use and by allowing the use to be continued. If that particular use can improve the social welfare, then the use should be considered as fair. Yet, balance approach is more suitable to the nature of fair use doctrine: "equitable rule of reason balance."[242] From an economic perspective, "fair use must necessarily balance, on the one hand, the potential public benefit of additional or better works from prohibiting the use at issue, and on the other hand, the potential public benefit from the use itself."[243] This balance approach, giving consideration to both allocative

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239 *Id.* at 1026. Users who engage in private copying are these who unwilling to purchase the full-price copyrighted works, if they can not get free copy of that work, they may choice not to enjoy it. Since in either situation the copyright owner can not collective money, allowing private copying would not make the copyright owner worse off while make users batter off, which is Pareto superior to not allowing private copying.

240 *Id.*

241 *Id.* at 1026.

242 *See supra* note 72.

243 *See* Lunney, *supra* note 139, at 1030.

efficiency and practicability, is the way most consistent with the goal of Copyright law, and thus the best way to analyze the applicability of fair use doctrine in an action of copyright infringement and the Copyright system as a whole.

4. THE BALANCE APPROACH AND ACCESS CONTROL MEASURE

Since the U.S. Digital Millennium Copyright Act of 1998 (DMCA) came into effect,[244] the anti-circumvention provisions coded in section 1201 of Copyright Act immediately became the most controversial issue between the academic circle and in the U.S. courts. Facilitated by the encompassed high technologies, reproduce and distribute illegitimate copies of copyrighted works in the digital form can be accomplished easily by average user, which dramatically endangers the copyright owner's rights and interests. Supported by the enactment of anti-circumvention provisions, however, copyright owners can self-help with technological measures that effectively control access to works protected by copyright.

In addition to further limiting the exclusive rights of copyright users, the DMCA's anti-circumvention prohibition excludes fair use as a defense to actions brought under § 1201(a). [245] Although § 1201(c)(1) provide that "Nothing in this

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244 17 U.S.C. §§ 1201-1205 (2001).

245 The representatives of copyright industries stated that: "The fair use doctrine has never given anyone a right to break other laws for the stated purpose of exercising the fair use privilege. Fair use doesn't allow you to break into a locked library in order to make 'fair use' copies of the books in it, or steal newspapers from a vending machine in order to copy articles and share them with a friend." Using "break into" and "steal" refer to "circumvent," in which very impressed the Congress who were in the debate regarding the scope of anti-circumvention, and thus, passed the stricter provision. *See* Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 529 (1999) (quoting Hear-

section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title."[246] However, "Copyright Infringement" and "Violations Regarding Circumvention of Technological Measures" are different infringement types. Besides, the liabilities of copyright infringement are provided in the Chapter 5 of Title 17: "Copyright Infringement and Remedies," yet the liabilities of breach anti-circumvention provisions are encode in the Chapter 12 "Copyright Protection and Management Systems." Therefore, under the DMCA provisions, users can not claim fair use as a defense in an anti-circumvention infringement action. Any one circumvent the access control measures will violate § 1201(a)(1)(A): "Violations Regarding Circumvention of Technologic Measures,"[247] unless the circumvent activity fit these limited exceptions provided in the same Act.[248]

In this chapter, the author will try to apply "Balance Approach" to the cases allegedly violate anti-circumvention provision. In doing so, the author anticipate to demonstrate the necessity of applying fair use doctrine in such cases in order to preserve public interests, and to emphasize the importance of the existence of fair use doctrine in the digital age.

4.1 The DVD Case

4.1.1 Case Brief

In the year 2000, there was a controversial issue regarding DeCSS distribu-

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ing on H.R. 2281 and H.R. 2280, the testimony of Allan Adler, who is testifying on behalf of the Association of American Publishers.).

246 17 U.S.C. § 1201(c) (2001).

247 17 U.S.C. § 1201(a)(1)(A) (2001).

248 17 U.S.C. §§ 1201(e)-(j) (2001).

tion,[249] the DVD case,[250] in which eight major United States motion picture studios filed suit under the Digital Millennium Copyright Act (DMCA), seeking to enjoin Internet web site "2600.com" owners from posting for downloading computer software that decrypted digitally encrypted movies on digital versatile disks (DVDs) and from including hyperlinks to other web sites that made decryption software available.[251]

Motion picture industry protects their motion pictures from copying by using an encryption system called CSS. CSS-protected motion pictures on DVDs may be viewed only on players and computer drives equipped with licensed technology that permits the devices to decrypt and play – but not to copy – the films.[252] In 1999, computer hackers devised a computer program called DeCSS that circumvents the CSS protection system and allows CSS-protected motion pictures to be copied and played on devices that lack the licensed decryption technology. Defendants quickly posted DeCSS on their Internet web site, 2600.com, thus making it readily available to much of the world.[253]

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249 Section 1201(a)(1)(A) did not become effective until Oct. 28, 2000. However, at that time the DVD case arisen, section 1201(a)(2), which prohibits any manufacture, import, offer to public or otherwise traffic any circumvent device, has been effected for more than one year. The DVD case was arisen under this "ban on trafficking" provision.

250 On Jan. 20, 2000, after a hearing, the District Court issued a preliminary injunction barring the Defendants from posting DeCSS. *Universal City Studios, Inc. v. Reimerdes*, 82 F. Supp. 2d 211 (S.D.N.Y. 2000). After a trial on the merits, the Court issued a comprehensive opinion, 111 F. Supp. 2d 294 [hereinafter *Reimerdes*], and granted a permanent injunction, 111 F. Supp. 2d 346.

251 Universal City Studios, Inc. v. Eric Corley, 273 F.3d 429, 434-35 (2d Cir. 2001) [hereinafter *Corley*].

252 *Reimerdes*, 111 F. Supp. 2d at 303, 310-11.

253 *See id.* The court has no doubt about that "DeCSS, a computer program, unquestionably is 'technology' within the meaning of the statute." *Id.* at 317. "CSS 'effectively controls

In the District Court, in additional to the First Amendment issue, defendants argued that using DeCSS to circumvent CSS consistent with the reverse engineering,[254] encryption research[255] and security testing[256] exceptions. Under the reverse engineering argument, defendants stated that DeCSS was written to further the development of a DVD player that would run under the Linux operating system.[257] However, because: 1. "these defendants did not do any reverse engineering. They simply took DeCSS off someone else's web site and posted it on their own;"[258] 2. "These defendants did not post DeCSS 'solely' to achieve interoperability with Linux or anything else;"[259] and 3. "DeCSS could be used to decrypt and play DVD movies on Windows as well as Linux machines;"[260] developing DeCSS is not solely for the purpose of making a Linux DVD player. Accordingly, the reverse engineering exception to the DMCA has no application here.

The District Court also rejected the encryption research and security testing arguments. To satisfy the encryption research exception requires determining that the person is lawfully obtained the encrypted copy; such act is necessary to con-

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access' to copyrighted DVD movies." *Id.* at 318. "The inescapable facts are that (1) CSS is a technological means that effectively controls access to plaintiffs' copyrighted works, (2) the one and only function of DeCSS is to circumvent CSS, and (3) defendants offered and provided DeCSS by posting it on their web site." *Id.* at 319.

254 17 U.S.C. § 1201(f) (2001) (allowing one may circumvent, or develop and employ technological means to circumvent, access control measures in order to achieve interoperability with another computer program.)

255 17 U.S.C. § 1201(g) (2001).

256 17 U.S.C. § 1201(j) (2001).

257 *Reimerdes*, 111 F. Supp. 2d at 319.

258 *Id.* at 320.

259 *Id.*

260 *Id.*

duct such encryption research; and the person made a good faith effort to obtain authorization before the circumvention.[261] The court concluded that the defendant can not satisfy any one of these requirements, thus the encryption research is not applied.[262] Finally, because the DeCSS has nothing to do with testing computers, computer systems, or computer networks, the security testing arguments also would not apply.[263]

As to the fair use defense, the defendant claimed that those who would make fair use of technologically protected copyrighted works need means, such as DeCSS, of circumventing access control measures not for piracy, but to make lawful use of those works.[264] Though the District Court has realized that "defendants have focused on a significant point, [a]ccess control measures such as CSS do involve some risk of preventing lawful as well as unlawful uses of copyrighted material,"[265] nevertheless, District Court judge Kaplan denied the applicability of this doctrine.

The court begins its statutory analysis with the language of the section 107 of the Copyright Act, which provides that certain uses of copyrighted works that

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261 17 U.S.C. § 1201(g) (2001).

262 *Reimerdes*, 111 F. Supp. 2d at 321.

263 *See Id.* "By the admission of both Jon Johansen, the programmer who principally wrote DeCSS, and defendant Corley, DeCSS was created solely for the purpose of decrypting CSS – that is all it does. Hence, absent satisfaction of a statutory exception, defendants clearly violated Section 1201(a)(2)(A) by posting DeCSS to their web site." *Id.* at 319.

264 *Id*, at 304.

265 *Id.* at 322. *See also id.* at 304, 322. ("Technological access control measures have the capacity to prevent fair uses of copyrighted works as well as foul. Hence, there is a potential tension between the use of such access control measures and fair use".) ("The use of technological means of controlling access to a copyrighted work may affect the ability to make fair uses of the work.").

otherwise would be wrongful are "not ... infringement[s] of copyright."[266] The court stated that defendants are not here sued for copyright infringement, but for offering and providing technology designed to circumvent technological measures that control access to copyrighted works and otherwise violating Section 1201(a)(2) of the Act.[267] "If Congress had meant the fair use defense to apply to such actions, it would have said so. Indeed, as the legislative history demonstrates, the decision not to make fair use a defense to a claim under Section 1201(a) was quite deliberate."[268]

Further, in the Appeal Court, by stating that "the Supreme Court has never held that fair use is constitutionally required,"[269] Judge Newman also rejected the defendant's claim that "the DMCA, as applied by the District Court, unconstitutionally 'eliminates fair use' of copyrighted materials."[270] Rather, because "[f]air use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user's preferred technique or in the format of the original,"[271] the court suggested that users who want to make a fair use of the access control protected film can though other less perfect means to obtain analogical copy, though the resulting copy may not be as perfect or as manipulable as a digital copy obtained by having direct access to the DVD movie in its digital form.[272] Still, since there are other means to make fair use, this less

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266 17 U.S.C. § 107 (2001).

267 *Reimerdes*, 111 F. Supp. 2d at 322.

268 *Id.*

269 *Id.*

270 *Corley*, 273 F.3d at 458.

271 *Id.* at 459.

272 "[T]he DMCA does not impose even an arguable limitation on the opportunity to make a variety of traditional fair uses of DVD movies, such as commenting on their content, quoting excerpts from their screenplays, and even recording portions of the video images

perfected result "provides no basis for a claim of unconstitutional limitation of fair use."[273] Consequently, the Appeal Court affirmed the holding of District Court that the defendants violated the anti-trafficking provision.

4.1.2 Applying balance approach

Both District Court and Appeal Court clearly point out that the violation of anti-circumvention provision is different from the copyright infringement, consequently, fair use can not applied in a action brought under DMCA. Accordingly, any one who wishes to make fair use of the access control protected digital work must first obtain the access permission. That is, of course, downgrade the fair use privilege. Yet, when apply the balance approach to analyze the DVD case, one can find that prohibit using DeCSS to access the CSS protected digital works will prevent achieving the ultimate goal of the Copyright Act: resources allocative efficiency.

The first two steps of balance approach require copyright owners to show preponderant evidence that some meaningful likelihood of actual or future harm to the work's market value exists, and to determinate that there is a likely relationship between that probable reduction of revenues and the production of copyrighted works. In the DVD case, the District Court found that using DeCSS to circumvent CSS have two major implications for plaintiffs.[274] First, the availability of DeCSS on the Internet will compel plaintiffs "either to tolerate increased piracy or to expend resources to develop and implement a replacement

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and sounds on film or tape by pointing a camera, a camcorder, or a microphone at a monitor as it displays the DVD movie." *Id.*

273 *Id.*

274 *Reimerdes*, 111 F. Supp. 2d at 315.

system,"[275] which is far more difficult and costly. Second, the application of DeCSS to copy and distribute motion pictures on DVD threatens to reduce the studios' revenue from the sale and rental of DVDs. It threatens also to impede new, potentially lucrative initiatives for the distribution of motion pictures in digital form, such as video-on-demand via the Internet.[276] "In consequence, plaintiffs already have been gravely injured. As the pressure for and competition to supply more and more users with faster and faster network connections grow, the injury will multiply."[277]

Doubtless, the Motion Picture Industry still makes movies. Movies are being issued on DVD at the rate of over 40 new titles per month in addition to re-releases of classic films,[278] there are no evidence showing any reduction of the production of movies. The fact is that these alleged harms have never been verified. Although the court thought it is unpersuasive, there is no direct evidence of a specific occasion on which any person decrypted a copyrighted motion picture with DeCSS and transmitted it over the Internet.[279] Noticed by court, a decrypted file is very large – approximately 4.3 to 6 GB or more depending on the length of the film,[280] transmission of a decrypted film on the Internet is almost impossible. Even after compressed by DivX, which take 10 to 20 hours to process, the compressed film is still 650 MB in size, which still will take a good deal

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275 *Id.* The court stated that "[i]t is analogous to the publication of a bank vault combination in a national newspaper. Even if no one uses the combination to open the vault, its mere publication has the effect of defeating the bank's security system, forcing the bank to reprogram the lock." *Id.*

276 *Id.*

277 *Id.*

278 *Id.* at 310.

279 *Id.* at 314.

280 *Id.* at 313.

of time to transmit on the Internet.[281] This time consuming problem certainly preclude many users from decrypting and transmitting the CSS protected films. Yet, DeCSS was designed to make a DVD player that would operate on a computer running the Linux operating system, by which actually open a new market for DVD to attract Linux users.[282]

The final step is to identify the public's interest in allowing the use to continue, by asking whether society would be better or worse off by allowing the use to continue. One consequence of applying technological measures such as CSS to DVDs is that many DVDs are unavailable to persons who desire to be lawful users of the works. With the protection of CSS, which performed as "region-coding," movies purchased in one geographic region of the world are not released in another region and are coded to refuse to play in other region's DVD players.[283] Playing a CSS protected DVD on a region-free player, then, would exceed "the authority of the copyright owner," violating Section 1201(a)(1). In other words, a purchaser of a CSS-protected DVD receives "authorization" only to play the DVD on a single-region, DVD-CCA compliant player.[284] Therefore, users

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281 *Id.* at 314. The transmission times ranging from three to twenty minutes to six hours or more for a feature length film are readily achievable, depending upon the users' precise circumstances. *See Id.*

282 As stated by Electronic Frontier Foundation (EFF), if DVDs can be viewed on previously unsupported operating systems, then the consumer base for DVDs is enlarged. Greater market value is assigned to a work that can interoperate with various formats and hardware. EFF Reply Comments to Copyright Office – on DMCA Anti-circumvention Provisions, *available at* http://www.eff.org/IP//DMCA/20000217_eff_dmca_ comments.html (last visit Dec. 6, 2007) [hereinafter EFF comments 1].

283 *See* EFF, DMCA 1201 Rule-Making - EFF Comments, 14-15, *available at* http://www.eff.org/IP//DMCA/20021218_EFFPKcomments.pdf (last visited Dec. 6, 2007) [hereinafter EFF comments 2].

284 *Id.* at 19.

can not view a foreign film without using DeCSS to circumvent the region code.

Besides, DVDs constitute a unique class of works available only electronically and for which there exists no substituting format to which technological measures have not been applied.[285] The use of CSS on DVDs significantly reduces the availability of movies for nonprofit, archival, preservation, and educational purposes. Because "authorized" DVD hardware prevents people from making a back-up copy of their lawfully purchased DVD, they are denied their legitimate rights under fair use to protect themselves against eventual media failure.[286] Further, the use of CSS also has severely restricted the ability of interested persons to engage in criticism, comment, news reporting, teaching, scholarship, and research. Again, because CSS prevent copying, reporters, journalists, teachers, and researchers are not able to copy portions of DVDs that they would be entitled to under copyright law's fair use privilege.[287]

"Copyright law could not require consumers to purchase DVD players from 'authorized' dealers when they could simply download free software that would play their DVDs on their computer."[288] Asking every user to purchase additional devices obviously whittle away their economic capacity, hence aggravate these negative impacts addressed above. As a result, the society would be worse off if preventing the use of DeCSS to continue. In conclusion, under balance approach, allowing public continuous using DeCSS will not cause meaningful likelihood of actual or future harm to the copyright owners, or more specifically, to the motion picture industry. More fundamentally, adopting CSS or regional code will radi-

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285 *See* EFF comments 1, *spura* note 282, at part B. These unique features including: extra scenes, interviews with actors and directors, additional language features, etc. *Id.*

286 *Id.* at part C.

287 *Id*, at part D.

288 *Id*, at part A.

cally eliminate the existence of fair use or non-infringement use, excessive empower copyright owns' benefits, and then destroy the balance between copyright owners and the public. Consequently, the result of adopting access control measures will drive Copyright system remove away from resource allocative efficiency.

4.2. The Lexmark Case

4.2.1 Case Brief

Lexmark, a worldwide manufacturer of laser printers, sells a type of printer called the T-Series and the printer's interoperated toner cartridges. The toner cartridges were sold with a microchip, which interfaces with the printer and allows the printer to authenticate that the cartridge is manufactured by Lexmark.[289] To accomplish this authentication sequence, Lexmark created a "Printer Engine Program" resides within each printer and a "Toner Loading Program" resides within the toner cartridges on the microchip.[290] Every time a toner cartridge inserts into the printer, each program will generating a Message Authentication Code ("MAC"), if the two MACs are matched, the toner cartridge is deemed authentic and the Printer Engine Program is accessed by the printer. If the cartridge is not

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289 Lexmark Int'l Inc. v. Static Control Components Inc., 253 F. Supp. 2d 943, 947-49 (E.D. Ky. 2003). After the district court uphold Lexmark's copyright infringement and DMCA violation claims, Static appealed the decision and filed an antitrust suit against Lexmark for trying to monopolize the market for toner cartridges that are used in Lexmark printers. The Sixth Circuit Court took the appeal and vacated district court's sentence on the ground that Lexmark's Toner Loader Program was uncopyrightable, thus cannot lay claim to the protection of Copyright Act and the DMCA. *Lexmark*, 387 F.3d 522 (6th Cir. 2004).

For the purpose of analyzing fair use doctrine, this part discussion about *Lexmark* case will force primary on the district court's finding.

290 253 F. Supp. 2d, at 948-49.

authentic, an error message is displayed and the Printer Engine Program is disabled.[291] In this way Lexmark is able to prevent unauthorized toner cartridges from being used with its printers.[292]

Static Control Components (SCC) manufactures SMARTEK microchip which contains a copy of Lexmark's Toner Loading Program, and was specifically designed by SCC to circumvent Lexmark's authentication sequence, the technological measure that controls access to both the Printer Loading Program and the Toner Loading Program.[293] By replacing the microchip found in Lexmark's toner cartridges with the SMARTEK chip, remanufacturers of toner cartridges can produce unauthorized toner cartridges that will work with Lexmark's printers.[294] Lexmark asserts that SCC infringed its copyright in its Toner Loader Program, and violated the DMCA by circumventing Lexmark's technological measures under the anti-trafficking provision.[295] The district court granted Lexmark's motion for a preliminary injunction, holding that Lexmark was likely to prevail on both the infringement claim and the anti-circumvention claim.[296]

As to the Copyright infringement claim, the court rejected the SCC's argument that the Toner Loader Program is purely functional which is required as part of the authentication sequence.[297] Because, the court found, 1) only 7 of the 55

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291 *See id*. at 952-54.

292 *See* Mark F. Radcliffe, *Drafting and Negotiating Internet License Agreements*, 754 PLI/PAT 1035, 1090 (2003).

293 *Lexmark*, 253 F. Supp. 2d at 954-55.

294 *See* Radcliffe, *supra* note 292, at 1090.

295 17 U.S.C. § 1201 (a)(2) (2001) .

296 *Lexmark*, 253 F. Supp. 2d at 947. The court ordered SCC "shall cease making, selling, distributing, offering for sale or otherwise trafficking in the 'SMAREK' microchips", *Id*. at 974.

297 *See id*. at 958.

bytes in the Toner Loading Program are used as part of Lexmark's authentication sequence, the authentication sequence can work correctly irrespective of the existence of a Toner Loading Program on the cartridge;[298] and 2) the Toner Loading Program can be written in a number of different ways,[299] therefore, the Toner Loading Program itself is not a "Lock-Out Code" but a creative expression, which entitled to copyright protection.[300]

The court also reject SCC's fair use defense, indicating that while the nature of the Toner Loading Program weighed slightly in SCC's favor,[301] the other three factors in the fair use analysis weighed strongly in Lexmark's favor. The court noted that the copying was conducted for commercial purposes, which weight against a finding fair use;[302] the entire work had been copied;[303] and the infringement had a strong effect on the potential market for the Toner Loading Program.[304] As to the misuse defense, SCC alleged, that Lexmark is "using copyright to secure an exclusive right or limited monopoly not expressly granted by copyright."[305] The court found this argument unconvincing and indicated "Lexmark's efforts to enforce the rights conferred to it under the DMCA cannot

298 *See id.* at 950, 958.
299 *See id.* at 950, 961-62.
300 "The Toner Loading Programs contain creative expression because of the creative choices made by Lexmark during the development of the Toner Loading Programs." *See id.*
301 *See id.* at 961.
302 *See id.* (citing *Campbell*, 510 U.S. at 585.)
303 "SCC did not have to engage in wholesale copying of the Toner Loading Programs in their entirety to enable interoperability,…" *Id.*
304 "Where…a verbatim copy of a work is made with the intended purpose of commercial gain, a likelihood of significant market harm is presumed." *Id.*
305 *See id.* at 966.

be considered an unlawful act undertaken to stifle competition."[306]

Finally, the court found 1) Lexmark's authentication sequence effectively "controls access" to the Toner Loading Program and the Printer Engine Program because it controls the consumer's ability to mark use of these programs.[307] 2) SCC acknowledged that its chips were specifically developed to circumvent the authentication sequence that controls access to Lexmark's programs.[308] 3) SCC's chips have no other commercial purpose.[309] 4) SCC market its microchips as being capable of circumventing the access control protections provided by Lexmark.[310] The court held that SCC was in violation of all three types of liability under the anti-circumvention provision. The court also rejected applying the reverse engineering exception under section 1201(f) to SCC, because the SMARTEK microchips were not independently created computer programs, but instead were copies of Lexmark's code, and that such exact copying constituted infringement under the Copyright Act.[311]

4.2.2 Applying Balance Approach

Form its beginning, this controversial case has attracted a lot of attention from all kinds of industries.[312] The central argument of the defendant's side is

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306 *Id*.

307 *Id*. at 968.

308 This finding satisfies the first independent test for liability in § 1201 (a)(2)(A). *See id*.

309 This finding satisfies the second independent test for liability in § 1201 (a)(2)(B). *Id*.

310 This finding satisfies the third independent test for liability in § 1201 (a)(2)(C). *See id*.

311 *Id*. at 970-71. *See also* § 1201(f)(2), (3) (2001).

312 There are several interested groups send *Brief Amicus Curiae* to support either party, such as Automotive Aftermarks Industry Association (AAIA); Computer and Communications Industry Association (CCIA); Law professors; Silicon Valley Toxics Coalition (SVTC); and Sony Computer Entertainment American. *See* EFF, Lexmark v. Static Control Case Archive, *available at* http://www.eff.org/cases/lexmark-v-static-control-case-archive (last

that the DMCA has been misused by Lexmark to extend the scope of its copyright for anti-competition purpose. After all, the two important priorities of DMCA are: 1) promoting the continued growth and development of electronic commerce; and 2) protecting intellectual property rights.[313] That is to say, the DMCA was designed to protect the rights of copyright owners in the digital world.[314] However, as observed by Law Professors, "[T]his [anti-circumvention] claim [in the Lexmark case] has nothing to do with the pirating of music or other copyrighted content; rather, it is a fairly naked attempt to suppress competition in the market for printer ink cartridges."[315]

In Supporting SCC, Electronic Frontier Foundation (EFF) declared in an *Amicus Curiae Brief* that SCC's conduct is "legal and in fact encouraged as fair use reverse engineering, both under traditional copyright law and under the

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visited Dec. 6, 2007).

313 *See* H.R. Rep. No. 105-551, pt. 2, at 22 (1998).

314 The few cases brought to date under the DMCA have borne some relationship to the typical scenario envisioned under the DMCA. Each involved the circumvention of a technological protection measure applied to prevent the reproduction and redistribution of an independently marketed, non-functional copyrighted work, *e.g.*, streamed sound recordings in *Real Networks v. Streambox*, 2000 U.S. Dist. LEXIS 1889 (W.D. Wash. 2000); motion pictures distributed on DVD in *Universal Studios v. Reimerdes*, 273 F.3d 429 (2d Cir. 2001); computer games in *Sony Computer Entertainment v. Gamemasters*, 87 F. Supp. 2d 976 (N.D. Cal. 1999) and electronic books in *United States v. Elcomsoft See* Lisa Bowman, *ElcomSoft verdict: Not guilty*, *available at* http://news.com.com/2100-1023-978176.html (last visited Dec. 6, 2007). However, the district court denied this vein of argument, stated that this argument would render section (a)(2) mere surplusage. *Lexmark*, 253 F. Supp. 2d at 969.

315 *See* Dan L. Burk, *Anticircumvention Misuses*, 50 UCLA L. REV. 1095, 1110 (2003) ("The object of the technological protection measure is not to prevent piracy of copyrighted works, but instead to protect a market for noncopyrighted consumable goods (lower-priced toner cartridges).")

DMCA's reverse engineering exception."[316] Even not to assert these original defenses under the copyright law and DMCA which rejected by the district court, when applying balance approach analysis to this case, we still can find that allowing SCC continuing produce SMARTEK microchip will make society better off without impair the market value of Lexmark's copyrighted work, as a result, SCC's use of Toner Loading Program should be found as fair.

To apply the first step of balance approach, "a court must determine whether the copyright owner has shown 'by a preponderance of the evidence that some meaningful likelihood of [actual or] future harm [to the work's market value] exists.'"[317] In the present case, the "work" in issue was the Lexmark's built-in "Toner Loading Program" – functioned as an interface between the printer and the Printer Engine Program – which can not work alone without interoperating with the toner cartridge or the printer.[318] Hence, even this Toner Loading Program is a copyrighted work as found by the court,[319] its market value as a copyrighted work is limited by its functional facility.[320]

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316 *See* EFF, Amicus Curiae Brief of Electronic Frontier Foundation in Support of Static Control Components, Inc., at 2, *available at* http://www.eff.org/files/filenode/Lexmark_v_Static_Control/20030702_eff_amicus.pdf (last visited Dec. 6, 2007) [hereinafter EFF, *Amicus*].

317 *See supra* note 228.

318 However, the court convinced by Lexmark and held that the program itself is not a lockout code but a program that estimates the amount of toner remaining in toner cartridges. *See Lexmark*, 253 F. Supp. 2d at 950.

319 Notwithstanding the copyrightability of this program is still in dispute, *see supra* note 284, for the purpose of this analysis, we tentatively accept the district court's finding that Toner Loading Program is a work protected under the Copyright Act and thus protected under the DMCA. *Lexmark*, 253 F. Supp. 2d at 969-70.

320 SCC argued that the DMCA was intended to be limited to the protection of copyrighted works with independent market value, *id*. at 969. However, the court found no grounds

In addition, while the district court found that this Toner Loading Program was a copyrighted work because it can be expressed in a number of ways, this fact also means that there could be a number of substitutes existing in the market, and thus, lessening the value of this program. Therefore, since the market value of the copyrighted work in issue is relatively low in the first place, it is unlikely that the copyright owner can show by a preponderance of the evidence that some meaningful likelihood of actual or future harm to the work's market value exists.

Nevertheless, when analyzing the applicability of fair use doctrine, the court found that Lexmark indeed might suffer a likelihood of significant market harm based on the fact that "a verbatim copy of a work is made with the intended purpose of commercial gain."[321] It is an illogical presumption, however, since the copyrighted work has no market value at all, how can "the non-existed market value" be harm by verbatim copy of that work? Consequently, the alleged market harm must come form other possibility, namely, the result of fair competition in the toner cartridges market.

In this vein of possibility, first of all, the "market value" is no long associated with the Toner Loading Program itself, but Lexmark's sale revenue of toner cartridges which the programs reside within. As to the "commercial gain" enjoyed by SCC, therefore, should be considered as a fair share of an open market of toner cartridges. Lexmark, as a manufacturer who produces mainly printers and toner cartridges – not interoperated computer programs, is unlikely to withdraw from the toner cartridges market simply because encounter normal competition. As long as Lexmark keeping in produce printers and toner cartridges, the copyrighted

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for this claim. Resorting to the statute, the court stated that the DMCA clearly prohibits circumvention of technological measures that control access to *a work protected by* the Copyright Act. *Id.*

321 *See supra* note 304.

work, such as Toner Loading Program, will still been produced if needed as interface. As a result, when applying the second step of the balance approach, we can say that there are no negative relationship exists between the production of copyrighted work and the probable reduction of the sale of toner cartridges.[322]

The third step of the balance approach is to identify the public's interest in allowing the use to continue.[323] The SCC and various amici specified that prohibited SCC from remanufacturing of toner cartridges and thus competing with Lexmark will impair public interest in the future, such as significant environmental degradation and stifling competition.[324] Silicon Valley Toxics Coalition (SVTC), a diverse coalition address the rapid growth of high tech waste,[325] was very concern about that prohibiting SCC to remanufacture Lexmark's cartridges, significantly more cartridges will inevitably end up in municipal landfills across

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322 The second step of this balancing approach "requires a determination of the likely relationship, if any, between that probable reduction and the production of copyrighted works." *See supra* note 231.

323 *See supra* note 237. In the "Public Interest Factor", the court ruling in favor of Lexmark, stated that "it is *virtually axiomatic* that the public interest can only be served by upholding copyright protection and correspondingly, preventing the misappropriation of the skills, creative energies, and resources which are invested in the protected work." *See Lexmark*, 253 F. Supp. 2d at 972 (*citing* Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1254 (1983)) (emphasis added). If the case been analyzed were an ordinary copyright infringement case, this "*axiom*" would be absolutely true. However, where the case been analyzed is a fair use case, like the DVD case, or an anti-circumvention misuse case, like here, this "*axiom*" is barely acceptable.

324 *Lexmark*, 253 F. Supp. 2d at 972-73.

325 *See* SVTC, *Amicus Curiae Brief of Silicon Valley Toxics Coalition in Support of Static Control Components*, Inc., at 1, *available at* http://www.eff.org/files/filenode/Lexmark_v_Static_Control/SVTC_SiliconValleyToxicsCoalition.pdf (last visited Dec. 6, 2007) [hereinafter SVTC, *Amicus*].

this country or abroad.[326] Moreover, SVTC predicted that if Lexmark were allowed to prevent others form reverse engineering its chips in this way, other manufactures would seek to do the same, thereby compounding the environmental impact.[327]

The Computer and Communications Industry Association (CCIA) also expressed its anxiety that by holding SCC liable for circumventing Lexmark's interface specifications, manufacturers like Lexmark could determine which products could interoperate with its software. And should that manufacturer have a dominant position in a particular market, it could use its control over interoperability to expand its dominant position into adjacent markets.[328] Such a broad monopoly would have serious implications for consumer welfare. In the absence of competition during the effective lifespan of the product, the first developer would have little incentive to develop more innovative and less costly products.[329] Consumers will be deprived of choice, forced to buy toner cartridges from Lexmark for the life of their printers at monopoly-based prices; they will likely see less innovation than they would enjoy in a competitive market for replacement

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326 *Id.* at 2. The *Lexmark* court rejected this statement and indicated that Lexmark have an extensive remanufacturing program to protect environmental. *See Lexmark*, 253 F. Supp. 2d at 972. However, as understood by SVTC, that Lexmark currently approximately 10 million new cartridges every year, and that remanufacturers currently refurbish approximately 1.8 million Lexmark's used cartridges each year. Without remanufacturers such as SCC, those 1.8 million used cartridges would be disposed in landfills instead. SVTC, *Amicus*, at 5.

327 *Id.* at 2.

328 *See* CCIA, Amicus Curiae Brief of Computer and Communications Industry Association (CCIA), at 3 *available at* http://www.eff.org/files/filenode/Lexmark_v_Static_Control/20030213-CCIAamicus.pdf (last visited Oct. 1, 2008).

329 *See id.* at 3-4.

cartridges.[330]

For the reasons above, allowing SCC continuing produce SMARTEK chips in order to remanufacture Lexmark's used cartridges – hence we can have clearer environment; and to compete with Lexmark – hence consumers can have varied and cheaper choices, the whole society would be better off. Accordingly, since all three steps stated above are in favor of SCC, SCC's conduct should be considered as fair use.

4.3 Fair Use in the Digital Age – A Brief Conclusion

In the Copyright system, because of its public good characteristic, empowering the copyright owners with exclusive rights is necessary incentive for their further creation. However, too large a monopoly will actually hinder the development of new works by limiting future creators' use of earlier works. Therefore, for a long time, fair use doctrine serves as a balance to protect the public from the copyright monopoly becoming so expansive which may stifles the very progress of the Copyright Law, to promote the process of science and useful art. This balanced result, in the language of economic, promotes optimal production, and thus allocative efficiency, of copyrighted works.

Nevertheless, in the digital age, with the help of access control measures and the endorsement of anti-circumvention provision under Digital Millennium Copyright Act of 1998 (DMCA), copyright owners can exclude non-payers to access their works. Copyrighted works once nonrival and nonexclusive now become exclusive, license system gradually replaces the existence of fair use doctrine. Some economists, who believe that fair use is a remedy when prohibitively high transaction cost prevents voluntary transaction, thus advocate access control measures

330 *See* EFF, *Amicus*, *supra* note 316, at 2-3.

because they can reduce the transaction costs, hence cure the failure. However, although access controls correct some market failures, they do not correct all of them. Because the inherent market failure of public goods – the nonrival characteristic of copyrighted works – can never be cured by access control measures, market failure approach is doomed to failure as a method to analyze Copyright jurisprudence and fair use doctrine.

Yet, other advocates argue that access control measures should be encouraged because they can facilitate the setting of price discrimination systems. Since Copyright Law empowers copyright owners with monopoly rights which result in deadweight loss, economists believe, contractual price discrimination scheme would be the most efficiency way of allocating resources which both transfers the deadweight loss to the reward captured by creators and equalizes consumers' access to works of the intellect. However, the promise of widen distribution of copyrighted works is not likely be true. Because the reduced deadweight loss presents not only the increased incentive to information providers, but also the lost utility realized by more affluent users, the contractual price discrimination model would be incapable of producing the same kinds and variety of progress, and distributing the same variety of creative materials as widely, as the traditional copyright framework.

The lack of applicability of market failure approach and contractual price discrimination scheme hence proven the existence of fair use doctrine is essential to Copyright system continuing in digital age. Under either way, access control measures can not maintain the balance between copyright owners' monopoly power and the public users' interest of accessing copyrighted works. Fair use doctrine can not be eliminated because it serves as an important *"quid"* to balance the *"quo"* of copyright's statutory monopoly. By which, fair use seeks to accommodate the author's need for remuneration and control while recognizing that in

specific instances the author's rights must give way before a social need for access and use. In this point of view, fair use doctrine is ingrained in Copyright system to promote the progress of science and useful art.

Toward this direction, balance approach provides a useful guide in comparing and then choosing between the values generated by prohibiting a particular use and by allowing the use to be continued. If that particular use can improve the social welfare, then the use should be considered as fair. Thus, in the digital age, where access control measures strengthen copyright owners' power to restrict public's access of copyrighted works, balance approach suggests that fair use defense should continuous apply to actions of anti-circumvention violation. When copyright owner can not show preponderant evidence that some meaningful likelihood of actual or future harm to the work's market value exists because the user circumvent the access control measure, nor can she determinate that there is a likely relationship between that probable reduction of revenue and the production of copyrighted works, and most importantly, if circumventing the access control measures in order to access the protected works is actually improve the social welfare, then the circumventing activity should be considered as fair and be allowed to continue.

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