Market Failure and Intellectual Property: A Response to Professor Lunney

Boston University School of Law
Law & Economics Series

2002

Wendy J. Gordon
Boston University School of Law

2002-10-01

Market failure and intellectual property: a response to Professor Lunney

MARKET FAILURE AND INTELLECTUAL PROPERTY: A RESPONSE TO PROFESSOR LUNNEY

WENDY J. GORDON*

Professor Lunney's piece in this volume[1] is interesting enough that I forgive him for misportraying my own work. In this short reply I will clarify my position, and then examine both the place of my market failure argument and the place of some of Professor Lunney's arguments within the future of Intellectual Property scholarship as a whole.

Professor Lunney describes a narrow interpretation of my market failure analysis.[2] He is not alone. For some reason, it has become standard for economically-oriented commentators to state that the accepted interpretation of copyright's "fair use" doctrine is to see fair use as responding to high transaction costs between copyright owner and user. It has also has become standard to cite me for that limiting proposition,[3] 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.[4]

Yet the point of my original article was not to limit fair use. Admittedly, I suggested a strong limit to fair use in the third part of my test—the substantial

* Professor of Law and Paul J. Liacos Scholar in Law, Boston University School of Law.

[1] Glynn S. Lunney, *Fair Use and Market Failure:* Sony *Revisited*, 82 B.U. L. REV. 975 (2002).

[2] He focuses primarily on my first article in the field, Wendy J. Gordon, *Fair Use as Market Failure: A Structural and Economic Analysis of the* Betamax *Case and its Predecessors*, 82 COLUM. L. REV. 1600 (1982) [hereinafter *Fair Use as Market Failure*].

[3] An example (with an ameliorating footnote) is Robert P. Merges, *The End of Friction? Property Rights and Contract in the "Newtonian" World of On-Line Commerce*, 12 BERKELEY TECH. L.J. 115, 130-34 (1997). Merges describes transaction-cost barriers between owners and users as having become "the prevailing view" of fair use, but notes that "[i]n all fairness, a re-reading of Gordon's article makes quite clear that this was only one of her chief insights." *Id.* at 130 n.52.

[4] *See, e.g.*, Tom W. Bell, *Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine*, 76 N.C. L. REV. 557, 584 n.129 (1998). For counter-arguments to Bell, see, e.g., Lydia Pallas Loren, *Redefining The Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1 (1997) (argument focused on market failure); Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981 (1996) (privacy argument).

injury hurdle.[5] I now think I was wrong to posit such a broad and stringent component to my proposed test and have recently argued that a showing of substantial injury should bar fair use for only a subclass of cases.[6] However, the substantial injury hurdle is not the issue before us now: We are looking at the market failure aspect of my analysis. As to that aspect, the goal was not to limit fair use, but quite the opposite.

The article aimed to show that the Court of Appeals for Ninth Circuit had been wrong to place all non-transformative uses—particularly, exact copying by consumers—outside the possibility of fair use.[7] To show that the Ninth Circuit's view limiting fair use to "productive" or transformative uses was overly narrow, I sought to illuminate a more persuasive rationale. The logic I proposed was one that asked, "Is there some reason we cannot be confident that deferring to a copyright owner's self-interested decision will also serve social goals?" If such a reason appeared, then it might make sense for a judge to refuse to defer to a copyright owner's veto, and instead make an independent determination as to whether the defendant's use should go forward. The resulting logic of market failure was not only descriptive of case results, but sensible from a policy perspective as well.

My methodology involved reviewing the role that market failure plays in ordinary law,[8] and then turning to a set of fact patterns well recognized as favoring fair use and showing that they corresponded to forms of market failure.[9] Once the reader understood how market failure illuminated various legal doctrines, she could better understand why non-creative copying (of the kind done by teachers who make photocopies for class, students who copy passages while note-taking and consumers who make copies with their VCR's and computers) might also be eligible for fair use if market failures appeared.

As an example of how market failure illuminates an aspect of traditional fair use law, consider the preference the fair use doctrine shows for the educational user. From an economic perspective, the preference can be explained in part

---

[5] *See* Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1618-22. My suggested test had three parts: "Fair use should be awarded to the defendant in a copyright infringement action when (1) market failure is present; (2) transfer of the use to defendant is socially desirable; and (3) an award of fair use would not cause substantial injury to the incentives of the plaintiff copyright owner." *Id.* at 1614.

[6] Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Commodification and Market Perspectives*, *in* THE COMMODIFICATION OF INFORMATION: SOCIAL, POLITICAL, AND CULTURAL RAMIFICATIONS 149 at 183-84 (Neil Netanel & Niva Elkin-Koren eds.) (forthcoming 2002) [hereinafter *Excuse and Justification*].

[7] Universal City Studios, Inc. v. Sony Corp. of Am., 659 F.2d 963, 970 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984). Although I agree with the Ninth Circuit that creative works deserve special solicitude under the fair use doctrine, the doctrine's shelter should not be restricted only to such works.

[8] *See* Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1607-10 (discussing the work of Calabresi, Coase, Demsetz, Markovitz, Polinsky, Posner, and others).

[9] *Id.* at 1627-35.

by the significant benefits the educator generates without receiving proportional reward: that is, the "positive externalities" he generates. A person who is able to generate significant external benefits in this way may be capable of producing a value-maximizing use of a copyrighted work, yet not have enough funds to let him purchase a license for engaging in the use.[10] A court interested in allowing the socially beneficial use to go forward may allow a liberty outside the market. The doctrinal name for the liberty is "fair use."

Similarly, consider the preference within the fair use doctrine for defendants who wish to use the copyrighted work for purposes of communicating ideas or facts of high public import. Such a defendant's efforts are not only likely to generate positive externalities of a monetary kind, but the public import may also be of a type that is not calculable in monetary terms. I argued that "nonmonetizable interest" should be added to "positive externality" as a relevant form of market failure.[11]

As another example, consider hostile uses of copyrighted works, such as parodies or negative reviews. Such uses are likely to receive generous fair use treatment. They too generate a kind of market failure: an unwillingness to license at any cost. This is a form of market failure because such pricelessness is a sign of strong "endowment effects."[12] In addition, our norms may require us to reject the legitimacy of the owner's desire to suppress, which involves rejecting the usual assumption of consumer sovereignty (that all desires are equal) upon which economic analyses are usually premised.[13] Thus, the

---

[10] *See* Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1630.

[11] *Id.* at 1631-32. I strongly doubt that characterizing "nonmonetizable interest" as a form of market failure originated with me, but I would be glad to defend the characterization.

[12] For my discussions of "endowment effect" in the context of fair use, see Gordon, *Excuse and Justification*, *supra* note 6, at 169-77; Wendy J. Gordon, *On the Economics of Copyright, Restitution, and "Fair Use": Systemic Versus Case-By-Case Responses to Market Failure*, 8 J. L. & INFO. SCI. 7, 35-39 (1997); Wendy J. Gordon, *Systemische und fallbezogene Lösungsansätze für Marktversagen bei Immaterialgütern* [*Systemic and Case-by-Case Responses to Failures in Markets for Intangible Goods* (Elisabeth Haberfellner trans.), *in* ÖKONOMISCHE ANALYSE DER RECHTLICHEN ORGANISATION VON INNOVATIONEN, BEITRÄGE ZUM IV. TRAVEMÜNDER SYMPOSIUM ZUR ÖKONOMISCHEN ANALYSE DES RECHTS, 328, 360-66 (Claus Ott & Hans-Bernd Schäfer eds., Verlag Mohr & Siebeck, Tübingen 1994); Wendy J. Gordon, *Toward a Jurisprudence of Benefits: The Norms of Copyright and the Problem of Private Censorship*, 57 U. CHI. L. REV. 1009, 1042 (1990) (book review). The logic of endowment effect is this: the hostile use causes harm to reputation and peace of mind. Reputation and peace of mind are "priceless" in the sense that they have high endowment effects. If an author had a right to refuse permissions, she might not sell licenses, even though, were the entitlement reversed, she might not be able to buy the user's silence. In cases of high endowment effect, therefore, the "highest-valued use" can change as entitlements change, and the market provides no stable guide to social value.

[13] For a discussion of "anti-dissemination motives," see Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1632. The logic of anti-dissemination motives adds another possibility to the list of market inadequacies: that although the market is neutral as between

presence of high transaction costs between copyright owner and potential user is just another example of market failure. With this in mind, it seems ordinary rather than exceptional that the fair use statute explicitly includes a form of passive, consumer-type copying (making "multiple copies for classroom use"[14]), and that fair use customs (such as note-taking) do the same. For fair use to embrace some forms of noncreative copying makes sense, provided some reason to distrust the market is present.

Does my analysis suggest that if the Internet's promise of reducing transaction costs is realized, fair use will disappear? Hardly. Note that none of the other forms of market failure canvassed—such as positive externalities or endowment effects—will diminish in a context where copyright owner and user can bargain at low transaction cost.[15] Moreover, what I present here is hardly an exhaustive list even of technical market failures.[16]

I very much regret the way the market failure approach has grown-up, or rather grown-down, since the publication of my original piece. Transaction cost barriers are neither the only kind of economic problem to which fair use responds, nor the only kind of problem to which fair use *should* respond. Further, maximizing economic value "as measured by willingness to pay"[17] is

---

tastes (the taste for hats, the taste for suppression, the taste for discrimination), some tastes and motives should not be recognized as valid. To value some tastes over others violates "consumer sovereignty," but has quite respectable roots elsewhere. *See, e.g.*, JOHN LOCKE, TWO TREATISES OF GOVERNMENT 309 (Peter Laslett ed., 2d ed. 1967) (3d ed. 1698, corrected by Locke) (refusing to give weight to objections based on "covetousness").

[14] 17 U.S.C. § 107 (2000).

[15] This is a point well emphasized by Loren, *supra* note 4, at 26.

[16] For another possible example of market failure, consider the problem of strategic behavior in an anti-commons. *See, e.g.*, Ben Depoorter & Francesco Parisi, *Fair Use and Copyright Protection: A Price Theory Explanation*, 221 INT'L REV. L. & ECON. 453, 458-59 (2002). Yet another issue that makes a difference for assessing fair use in the digital context is privacy. To track a consumer's copying patterns for purposes of charging him money could reveal a great deal that the consumer would prefer to keep private. This problem could be characterized as a technical market failure (because, for example, the cost of technologically or contractually eliminating dangers to privacy could be seen as a transaction cost) or as a concern with alternative norms. As discussed further below, *see infra* text accompanying notes 34-37 and Gordon, *Excuse and Justification*, *supra* note 6, at 165-75, it may be useful to distinguish between reasons to distrust the market that stem from an inability to attain the technical conditions of perfect competition (because, for example, significant transaction costs are present) and reasons to distrust the market that stem from competing norms.

[17] This is the definition of "value" from Richard Posner's early work: value is "human satisfaction as measured by aggregate consumer willingness to pay for goods and services." RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 10 (2d ed. 1977), *cited in* Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1606. For an approach to economics less used by lawyers but more similar to that used by academic economists, see Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001). As Kaplow and Shavell point out, Judge Posner has himself amended his stance. *See id.* at 996 n.68.

not the only norm that matters or should matter for fair use.

One factor contributing to the devolution of my market failure approach may have been literalism: since the term is "market failure," it can connote a complete failure of bargaining, perhaps calling up an image of owners and users who cannot meet because of transaction cost barriers. However, "market failure" has long been a term of art, employed not simply to denote actual failures of markets to appear, but also to embrace the many other ways in which real world market systems can fail to align private and social economic welfare. (Also, I may have muddied the waters by attempting to use the term even more broadly, to embrace ways in which real world markets can fail to achieve even non-economic social goals. If so, my forthcoming essay offers a solution—dividing the ways in which markets can fail into two types.[18])

Despite my decision to use "market failure" terminology, I do not think the narrow view of fair use can be laid at my door. It is true that back in 1982, when *Fair Use as Market Failure* was published, I had greater hopes for intellectual property's use of both the efficiency norm and market institutions than I do today. Nevertheless, even in 1982, I was arguing that nonmonetizable interests should count as a species of market failure,[19] thus explicitly admitting that maximizing value, as measured by willingness to pay, did not exhaust the relevant norms. A few years later, I was arguing that endowment effects could make it meaningless to inquire into monetary valuations, particularly for items that are tied to priceless goods such as reputation.[20] About that time, I was also arguing that claims of justice gave both authors[21] and the public[22] entitlements that were not fully dependent on economics. I have, before and since, further explored the links between consequentialist and non-consequentialist reasoning.[23] Moreover, in articles

---

[18] I try to clarify the distinction between technical and normative market failure in Gordon, *Excuse and Justification*, *supra* note 6, at 183-84, which is discussed further at *infra* text accompanying notes 34-37.

[19] Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1630-32.

[20] *See supra* note 12 (describing the endowment effect). This is connected to the issue of indivisibility: reputation and a license to quote one's work negatively may not be separable goods.

[21] Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1540-55 (1993); Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent and Encouragement Theory*, 41 STAN. L. REV. 1343, 1435-60 (1989).

[22] Gordon, *A Property Right in Self Expression*, *supra* note 21, at 1535-40, 1555-72, 1578-09; Gordon, *An Inquiry into the Merits of Copyright*, *supra* note 21, at 1460-65; *see also* Wendy J. Gordon, *Reality as Artifact: From* Feist *to Fair Use*, 55 LAW & CONTEMP. PROBS. 93, 100 (1992).

[23] *See, e.g.*, Jane C. Ginsburg, Wendy J. Gordon, Arthur R. Miller & William F. Patry, *The Constitutionality of Copyright Term Extension: How Long is Too Long?*, 18 CARDOZO ARTS & ENT. L.J. 651, 674-86 (2000) (presentation by Gordon); Wendy J. Gordon, *Norms of Communication and Commodification*, 144 U. PA. L. REV. 2321 (1996); Gordon, *A Property*

pursuing my continued interest in economics, I have expended a significant number of electrons questioning whether exclusion rights of the property form are really the best way to deal with prisoner's dilemma problems in intangibles,[24] and a large part of my concern has been similar to Professor Lunney's—the danger that the growth of propertarian models will cause us to lose the promise that could otherwise inhere in inexhaustibility.[25] The promise is not only one of increased dissemination: I have argued that inexhaustibility can also help make practical the kind of affectional exchange and gratitude that enlivens creative community and promotes trust and law-abidingness,[26] and (in some circumstances) can "promote Progress"[27] as well as, or better than, monetary incentives.[28]

"Market failure" is a key concept because the system of tort, property, and contract that constitutes American law is predominantly a market system[29] in which it is hoped that private self-interest will operate in a way consistent with the public's economic welfare.[30] The importance of "market failure" as a concept is a virtual tautology: if our market system is usually supposed to reconcile private and public goals, and if sometimes our courts or legislatures create a privilege or limit a cause of action because the market system fails to do some part of its task, "market failure" is an appropriate and useful organizing device.

It is true, as Professor Lunney emphasizes, that our market system evolved

---

Right in Self-Expression, *supra* note 21, at 1608; Wendy J. Gordon, *Truth and Consequences: The Force of Blackmail's Central Case*, 141 U. PA. L. REV. 1741 (1993); Gordon, *Toward a Jurisprudence of Benefits*, *supra* note 12, at 1026-46.

[24] *See, e.g.*, Wendy J. Gordon & Robert Bone, *Copyright*, *in* 2 ENCYCLOPEDIA OF LAW & ECONOMICS 189 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000); Wendy J. Gordon, *Authors, Publishers and Public Goods*, 36 LOY. L.A. L. REV. 159, 174-76 (2002) (symposium on the *Eldred* case); *see also* Wendy J. Gordon, *Intellectual Property As Price Discrimination: Implications For Contract*, 73 CHI.-KENT L. REV. 1367, 1370-72 (1998).

[25] *See, e.g.*, Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 277-81 (1992).

[26] *See* Gordon, *Excuse and Justification*, *supra* note 6, at 188-91 (also discussing choice of remedy); Gordon, *Authors, Publishers and Public Goods*, *supra* note 24, at 184-88.

[27] U.S. CONST. art. I, § 8, cl. 8.

[28] Gordon, *Authors, Publishers and Public Goods*, *supra* note 24, at 174-75, 184-88; Wendy J. Gordon, *Intellectual Property*, *in* OXFORD HANDBOOK OF LEGAL STUDIES (Mark Tushnet & Peter Cane, eds.) (forthcoming 2003).

[29] Entitlements are given by the law and traded by individuals. Prices serve as a signal to direct resources to their highest-valued uses.

[30] The notion that private self-interest in a perfect market will be consistent with the public's economic welfare is usually traced to Adam Smith and is referred to by use of his metaphor, "the invisible hand." ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 477 (Edwin Cannan ed., Univ. of Chicago Press 1976) (1776) (contending that the self-interested market actor in a competitive economy is "led by an invisible hand to promote an end that which was no part of his intention").

to take account of tangible and exhaustible goods. Yet, even for tangibles and land, where allowing use without compensation is likely to hurt the owner, our law limits the owner's causes of action and allows defenses in instances of market failure.[31]

Copyright and patent adopt this market system for application to intangible goods, again with the hope of serving both private and public welfare.[32] Because of inexhaustibility, someone using an intangible does not necessarily harm the owner. *A fortiori,* then, precisely as Professor Lunney says, when dealing with intangibles there are even more grounds for limiting an owner's cause of action or allowing defenses. My only puzzle is why Professor Lunney thinks I disagree.

To inquire into "market failure" is simply to ask, when can we as a society not safely rely on the bargain between owner and user to achieve social goals? To realize that we cannot always reach these goals by automatic deference to an owner is hardly to embrace economic efficiency as the only norm. To the contrary, it must be recognized that efficiency is just one way in which private and social goals can converge. As my more recent work makes explicit, when efficiency is unattainable, or other evidence exists that appropriate goals cannot be served by deferring to an owner, it may be appropriate for a court to refuse to enforce an otherwise relevant property right.[33]

As mentioned, in a recent article I suggest that it might be useful to divide market failures (and fair use) into two categories.[34] In one category belong "technical failures" that prevent perfect competition from arising. These failures might result from the presence of, for example, endowment effects, high transaction costs between owner and user, transaction costs that prevent a user from internalizing the social benefit she generates, indivisible products, and strategic behavior. The category of technical market failure corresponds to the way many economists use the notion of "market failure." A second category addresses all the normative reasons why we might not want to rely on the market, such as dissatisfaction with the pursuit of economic value.

I use the term "excuse" to denominate the category of technical market failure. The absence of permission and payment is excused because of special circumstances,[35] but the goal remains the furtherance of economic welfare. By

---

[31] A classic work on this foundational point is Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

[32] Intellectual property law grants exclusive rights in the hope that the deadweight loss caused by the grant of exclusivity will be lower than the value of increased creative works drawn forth.

[33] *See* Gordon, *Excuse and Justification*, *supra* note 6, at 156.

[34] *Id.*

[35] A circumstance that triggers "excuse" can arise whenever reality fails to conform to the assumptions underlying the "invisible hand." *See supra* note 30. This failure can occur at a quite general level. For example, imagine we could identify a species of author or innovator who does not respond as *homo economicus* would, but who instead is indifferent

contrast, I use the term "justification" to denominate the category where the importance of non-economic norms makes us distrust the market. To find a use "justified" is to have concluded that, whether or not the technical conditions of perfect competition happen to be present, the user's failure to pay or failure to obtain permission[36] in the particular context is something that should be emulated. Both technical and normative market failures, excuse and justification, are instances in which we cannot trust the market system of ordinary property, tort, and contract to achieve desired goals.

Professor Lunney says that many interpret the *Sony* case as implementing a transaction cost approach. If this interpretation is accurate, then under my new taxonomy the case would be an instance of technical market failure, or "excused" fair use. However, I agree with Professor Lunney that the writers of the *Sony* opinion did not frame their decision as determined by the transaction cost issue.[37]

Under conditions of either excuse or justification, absence of permission from an owner, and a lack of payment to him,[38] can be affirmatively desirable. Identifying these conditions—and applying the resulting insights both to the fair use doctrine and beyond it—is one of the major tasks facing Intellectual Property scholarship. Economics provides many important tools for identifying and analyzing IP contexts in which the market should be disfavored.[39] So do sociology, psychology, literary theory and a number of other disciplines.

Work on this crucial task is already well begun. Rebecca Eisenberg and

---

to monetary incentives. That would give rise to an instance of "excuse": with such persons as market actors, we could not trust the market to achieve maximum welfare. Of course, were reality to diverge this sharply from the economist's ordinary assumptions, the market might no longer be the best institutional concept with which to begin analysis. *See infra* text accompanying note 46 (discussing the commons as an alternative starting place for analysis).

[36] Permission and payment are, of course, quite different issues. *See e.g.*, Gordon, *Excuse and Justification*, *supra* note 6, at 158-72 (distinguishing among the desirability of the defendant's behavior, the desirability of the defendant's not having obtained consent, and the desirability of the defendant's not having paid compensation); *id.* at 188-91 (discussing special problems presented by limiting copyright owners to a money-only remedy); Gordon, *Fair Use as Market Failure*, *supra* note 2, at 1622-24 (discussing whether judicially-imposed compulsory licenses could provide an alternative to fair use).

[37] Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417 (1984).

[38] *See supra* note 36.

[39] It should be remembered that the market is only one of many institutional forms through which persons can seek maximize economic welfare. The firm is another such institution. R.H. COASE, THE FIRM, THE MARKET AND THE LAW (1988); R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937). So, too, in appropriate contexts, is a commons. *See, e.g.*, Yochai Benkler, *Coase's Penguin, or Linux and* The Nature of the Firm, 112 YALE L.J. (forthcoming December 2002) (on file with author); sources cited *infra* note 45.

Arti Kaur Rai in the realm of basic science,[40] Lewis Hyde in regard to the arts (particularly literature),[41] Thomas Mandeville in the area of information economics,[42] and Yochai Benkler in the field of institutional economics (particularly as applied to computer software),[43] have each valuably pointed to areas and ways in which individuals and society can benefit less from a monetary market than they could from a flow of information and works unimpeded by toll booths.

Professor Lunney's emphasis on the value of inexhaustibility contributes valuably to this new direction.[44] We are learning continually more about the values and behaviors fostered by relationships of gift (Hyde), the conflicts between scientific norms and exclusivity (Eisenberg and Rai), the ways in which highly uncodified information is transmitted (Mandeville), the workings of "commons-based peer production" (Benkler), and the other ways and contexts in which a lack of exclusivity may be a delight rather than a tragedy.[45] Eventually we will develop a systematic set of tools for recognizing those areas in which the better starting place for analysis is not the market but a type of commons.[46] Until then, it is useful to begin with the model of the market—a model whose workings and virtues we know relatively well. In that endeavor, market failure remains the central organizing trope. We simply must be sure to include within it all the ways in which markets can let us down.

---

[40] Arti Kaur Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 NW. U. L. REV. 77 (1999); Rebecca Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017 (1989); Rebecca Eisenberg, *Proprietary Rights and the Norms of Science in Biotechnology Research*, 97 YALE L.J. 177 (1987).

[41] LEWIS HYDE, THE GIFT: IMAGINATION AND THE EROTIC LIFE OF PROPERTY (1983).

[42] Thomas Mandeville, *An Information Economics Perspective on Innovation*, 25 INT'L J. SOC. ECON. 357 (1988), *reprinted in* INTELLECTUAL PROPERTY: THE INTERNATIONAL LIBRARY OF ESSAYS IN LAW AND LEGAL THEORY, SECOND SERIES 41 (Peter Drahos ed., 1999).

[43] Benkler, *supra* note 39.

[44] *See supra* notes 25-28 and accompanying text.

[45] *See, e.g.*, Peter Drahos, *Introduction* to INTELLECTUAL PROPERTY: THE INTERNATIONAL LIBRARY OF ESSAYS IN LAW AND LEGAL THEORY, SECOND SERIES, at xiv-xix (Peter Drahos ed., 1999); Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998); Frank L. Michelman, *Ethics, Economics and the Law of Property*, *in* ETHICS, ECONOMICS, AND THE LAW 3 (J. Roland Pennock & John W. Chapman eds., 1982); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986); David Lange, *Recognizing the Public Domain*, 44 LAW & CONTEMP. PROBS. 147, 147-48, 171-78 (1981); *see also* Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1990).

[46] For further discussion, see Wendy J. Gordon, *Intellectual Property*, *in* OXFORD HANDBOOK OF LEGAL STUDIES (Mark Tushnet & Peter Cane eds.) (forthcoming 2003).