The Fable of the Commons: Exclusivity and the Construction of Intellectual Property Markets

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[*] Professor of Law, Southern Methodist University, Dedman School of Law. I would like to thank Professors Madhavi Sunder and Anupam Chander for organizing the Symposium on Intellectual Property and Social Justice, held at the UC Davis School of Law, and for their graciousness in inviting me to contribute. Thanks to all the student editors for their hard work in administering the event and herding the contributors. Finally, the ideas in this paper were improved by comments from the participants at the Symposium, as well as from members of the audience for my public lectures at the AHRC Centre for Studies in Intellectual Property and Technology Law at the University of Edinburgh and at the Oxford Internet Institute. Special thanks are extended to Professors Rosemary Coombe, Paul David, and Keith Aoki for their critical commentary and encouragement.

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INTRODUCTION

Professor Garrett Hardin's article, *The Tragedy of the Commons*, begins with a curious statement: "The population problem has no technical solution; it requires a fundamental extension in morality."[1] While Hardin's description of the tragedy of the commons has served as fodder for intellectual property jurisprudence,[2] his recommendation of morality has received less scrutiny. By morality, Hardin meant temperance, and his rejection of a technical solution was an acknowledgment that "social arrangements,"[3] rather than scientific solutions, would provide the correct response to an overburdened commons.

For a legal audience, Hardin's solution of morality contrasts with property rights, the more recognized approach to resolving the tragedy of the commons.[4] Morality, however, is perhaps not inapposite to an appeal to property rights, which is a particular type of "social arrangement," to borrow Hardin's phrase. Those who advocate for a property rights solution often rely on the role of property in self-determination and internalization of public harms, each of which certainly has a moral dimension. Furthermore, the Lockean proviso, the mandate that those who use the commons must leave it "enough and as good," often shouted as if from a pulpit, echoes Hardin's appeal to temperance.[5] If Hardin is correct that morality is the solution, then it is not too far afield to address the question that is the subject of this article: how should notions of distributive justice inform management of the commons through the construction of intellectual property law?

Hardin's teaching about the commons, however, can mislead the unwary in two ways. First of all, Hardin's script for the commons does

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[1] Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1243 (1968).

[2] *See, e.g.*, LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD (2001) (elaborating on Hardin's "tragedy of the commons"); David E. Adelman, *A Fallacy of the Commons in Biotech Patent Policy*, 20 BERKELEY TECH. L.J. 985 (2005) (describing and criticizing concept of commons); Lee Anne Fennell, *Common Interest Tragedies*, 98 NW. U. L. REV. 907, 918-19 (2004) (illustrating application of concept of commons); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986) (representing prevalence of tragedy of commons in property scholarship and offering counter-narrative to Hardin).

[3] Hardin, *supra* note 1, at 1247.

[4] *See* YORAM BARZEL, ECONOMIC ANALYSIS OF PROPERTY RIGHTS 3-16 (2d ed. 1997).

[5] *See, e.g.*, JEREMY WALDRON, GOD, LOCKE, AND EQUALITY: CHRISTIAN FOUNDATIONS OF LOCKE'S POLITICAL THOUGHT 131-33 (2002) (examining religious roots of Locke); William A. Edmundson, *First Force*, 1 J. ETHICS & SOC. PHIL. 1 (2005) (commenting on Lockean proviso).

not fit the drama of intellectual property. Instead, the commons problem is quite different and requires different social arrangements in the design of intellectual property compared to real property, the subject of Hardin's tragedy. One indication of this difference is the contrast between the activities at issue in Hardin's story and the activities at issue in the usual conception of intellectual property. In the tragedy of the commons, activities include overgrazing, dirtying the water and air, and breeding. These activities lead to the overuse of the commons.[6] For intellectual property, the activities at issue are creating and innovating, processes that in effect lead to the expansion of existing commons rather than their overuse.[7] Hardin's tragedy is about the commons looking in; intellectual property is about looking out from existing commons to more expansive horizons. I enunciate this difference in what I call the "fable of the commons," a narrative device that illustrates the relevance of the concept of the commons for intellectual property. The fable of the commons differs from Hardin's tragedy in the emphasis on the types of human activities that are central to the preservation and expansion of the commons. Human activities include the labor, work, and action (the *vita activa*, as used by Hannah Arendt)[8] that support creativity and invention.[9] In addition, my proposed fable explicitly incorporates distributive justice issues into our understanding of intellectual property as a means of commons regulation and development.

Second, Hardin's view of morality presents a strained view of distributive justice. For the purposes of this article, I define distributive justice as a normative claim about the allocation of resources among individuals in society.[10] To say that a particular legal

[6] Hardin, *supra* note 1, at 1245.

[7] *See* LESSIG, *supra* note 2, at 103.

[8] HANNAH ARENDT, THE HUMAN CONDITION 12-15 (1958).

[9] For an approach related to the focus on activities that I advocate here, see Julie E. Cohen, *Copyright, Commodification, and Culture: Locating the Public Domain*, *in* THE FUTURE OF THE PUBLIC DOMAIN 121, 121-66 (L. Guibault & P.B. Hugenholtz eds., 2006) ("[T]he right approach to the relationship between the proprietary and the public in copyright law is . . . more careful attention to creativity as a social phenomenon manifested through creative practice."). I disagree in part with Professor Cohen's rejection of the need to study "markets for creative products" in order to better understand the public domain. It is precisely a deeper understanding of the construction of markets, and of how this construction is shaped by conceptions of creativity and entrepreneurship, that is necessary for the construction of the public domain.

[10] *See* KEN BINMORE, NATURAL JUSTICE 14-18 (2005); JOHN BROOME, ETHICS OUT OF ECONOMICS 116-19 (1999); LOUIS KAPLOW & STEPHEN SHAVELL, FAIRNESS VERSUS WELFARE 121 (2002); JOHN E. ROEMER, THEORIES OF DISTRIBUTIVE JUSTICE 1-2 (1996);

regime fails on distributive justice grounds means that some value other than the total, aggregate level of wealth or welfare in society is normatively important in gauging the correctness of a particular resource allocation. In other words, who gets what and how matters as much as how much there is to divide. Hardin, in advocating morality as a means of solving the tragedy of the commons, adopted a very regressive view of distributive justice. Following Thomas Malthus, he concluded that the poor who could not control themselves in their reproductive habits had to have their freedom limited by society.[11] In effect, within the terms of distributive justice, Hardin recommended that resources in the form of legal entitlements be taken away from those who could not exercise these freedoms responsibly. Distributive justice, as I argue, requires more than social control of those who cannot control themselves. Contrary to Hardin, distributive justice supports social arrangements that aid and distribute resources to those who are excluded from democratic and market arrangements. In this article, I focus on three dimensions of distributive justice: justice among creators, justice among creators and users, and intergenerational justice.

Understanding intellectual property within the framework of distributive justice is a direct challenge to current trends to turn intellectual property into a proprietary system that supports a network of licenses. The framework of distributive justice harkens back to decisions such as *State v. Shack*, in which the Supreme Court of New Jersey reminded us that "property rights serve human values."[12] In a case involving employers' ability to use rights in land to prevent social workers from communicating with migrant workers, the court forcefully made a claim that is even truer for intellectual property: "Title to real property cannot include dominion over the destiny of persons the owner permits to come upon the premises."[13] By expanding the normative criterion of wealth and welfare maximization to include distributive justice, the key move in this Article, I am deeply influenced by Hannah Arendt's reminder that one often forgets that "wealth and property, far from being the same, are of an entirely

Kenneth J. Arrow, *Distributive Justice and Desirable Ends of Economic Activity*, *in* ISSUES IN CONTEMPORARY MACROECONOMICS AND DISTRIBUTION 134, 135 (George R. Feiwel ed., 1985).

[11] Hardin, *supra* note 1, at 1247; *see also* Garrett Hardin, *The Case Against Helping the Poor*, PSYCHOL. TODAY, Feb. 1974, at 38.

[12] 277 A.2d 369, 372 (N.J. Sup. Ct. 1971).

[13] *Id.*

different nature."[14] Invoking pre-modern concepts of society, Arendt points out, "Originally, property meant no more or less than to have one's location in a particular part of the world and therefore to belong to the body politic . . . ."[15] While modern concepts of property eschew such status indicators, it is nonetheless true that in defining property rights we need to think of how to define the right to exclude in a way that is inclusive of all groups in markets and in civil society. This Article attempts to address that challenge.

Part I presents my fable of the commons, which adapts Hardin's tragedy of the commons to the activities of creation and invention, and shows how distributive justice concerns arise in this alternative vision of the commons. Part II presents the problem of distributive justice as it applies to distributions among creators, among creators and consumers, and among generations. Finally, Part III applies the analysis to four current legal controversies: (1) fair use, (2) secondary liability, (3) antitrust, and (4) traditional knowledge.

I. LOOKING BEYOND THE COMMONS: TURNING HIGH TRAGEDY INTO LOW DRAMA

Hardin attributes the tragedy of the commons to William Forster Lloyd, a nineteenth century economist, who devised the tragedy as a response to Adam Smith's "invisible hand."[16] Although Lloyd's writings do not mention intellectual property, his formulation of the tragedy shares one crucial feature with contemporary discussions of intellectual property: both appeal to a dynamic view of human activity. For Lloyd, the tragedy arose from a conflict between two types of growth: the geometric increase of population and the arithmetic increase of agriculture.[17] Without some check on the usage of the commons, the growth in population would place pressures on the use of agricultural resources with an inevitable decline. Stories of intellectual property are also situated within a dynamic frame.[18] Intellectual property rights foster creativity and invention, promoting progress that benefits the public. Lloyd's dreary tale, however, contrasts with the optimism of intellectual property stories. Why then does the metaphor of the commons have such sway in debates over intellectual property?

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[14] ARENDT, *supra* note 8, at 61.

[15] *Id.*

[16] Hardin, *supra* note 1, at 1244.

[17] W.F. LLOYD, TWO LECTURES ON THE CHECKS TO POPULATION 28-29 (1833).

[18] *See* LESSIG, *supra* note 2, at 120-22.

In this Part, I argue that our notion of the commons needs to be refashioned to accommodate the types of stories we tell about intellectual property. My revised fable of the commons allows us to distinguish between intellectual property and other types of property systems. More importantly, a revised and more complete understanding of the commons permits the introduction of the values of distributive justice in building the intellectual property commons.

A. The Fable of the Commons

Imagine a denizen of the commons. One day she looks out beyond the pastures shared with her fellow residents to the ocean that surrounds the communal island. She sees what at first looks like an optical illusion, the play of clouds and water, but what slowly reveals the jagged peaks of a mountain range. Beyond the boundaries of her commons, past the ocean waves, lies land, and on that land appears to be another world, another set of possibilities. Driven by whatever need or interest, imperfectly defined and understood, she decides to pursue this destination, planning the travel arrangements, thinking through the journey. After she takes off for the new world, our voyager notices that several fellow denizens are pursuing the same dream. As the race continues, each traveler wants to arrive first, unsure of what is in store for her on the new commons. When they reach the new commons, many of the vexing problems from the old world come back to haunt them, and the voyagers seek new solutions and social arrangements to address familiar tensions.

The intellectual property commons is about the voyage. It is also about the planning before the ships are launched, and what happens when the ships reach the new land and settlements begin. The fable contrasts with Hardin's vision in which the residents of the commons look inward and grapple with problems of overuse and strained resources. The intellectual property commons is decidedly about looking outward, about exploring new horizons, and ultimately about expanding the existing commons.

These differences, however, should not eclipse the similarities, which inform much of the current scholarship about intellectual property and the commons.[19] While the traditional story looks inward and mine looks outward, both highlight the problem of resource management. Our initial intrepid voyager had to manage the

[19] *See, e.g.*, WILLIAM M. LANDER & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 12-14 (2003) (analyzing place of intellectual property in theory of commons management).

resources of the existing commons to fashion her boat and perhaps to persuade others to join her on the voyage. The resources needed to explore the new commons put demands on the existing commons. During the race to the new land, there are issues of what can and cannot be done at sea as the voyagers grapple to arrive first. In addition, upon arrival to the new land, Hardin's tragedy readily appears again as settlement in the new world introduces the struggles of the old.

Of course, these are both fables. There is nothing inevitable about either story. For Hardin, social arrangements would head off the tragedy of the commons. For the intellectual property commons, social arrangements will also guide the voyagers' decisions to set sail, the terms of the race, and the nature of settlement. However, the fables serve an illustrative purpose. Social arrangements will be the guide, but the contrasting fables help to isolate what forms the varied social arrangements might take.

It is important to note that my proposed fable, like Hardin's tragedy, is about land; however, that similarity is misleading. Even though I couch my fable in terms of uses of land with language like "settlement" and "discovery," the presence of land is not crucial to my story. What matters are the activities, the ends to which the resources are put, and the means by which the resources are used. As stated previously, Hardin's tale is about individuals looking into the commons; my tale is about individuals looking outside to expand the commons. This attitude toward the commons implicates the types of activities at stake and the types of ideal social arrangements that would need to be implemented. For Hardin, the key activities are reproduction and the harvesting of resources. For the fable of the intellectual property commons, the key activities are the processes of creation and invention that support the expansion of the commons.

My proposed fable is perhaps misleading with its emphasis on land metaphors. For some, the metaphor of land might suggest that intellectual property should be treated exactly like real property.[20] In fact, some scholars have reached that conclusion by arguing that intellectual property, like real property, is necessary because of the activity of prospecting.[21] But the well-known prospect theory focuses only on the ending to my fable, when the voyagers have reached the new land and are not confronted with issues reminiscent of the old

[20] *See, e.g.*, Dan Hunter, *Cyberspace and the Tragedy of the Digital Anticommons*, 91 CAL. L. REV. 439, 460-65 (2003).

[21] *See* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 267-69 (1977).

commons. It is perhaps true that at this last stage, the new commons and the old commons are identical, requiring similar social arrangements. However, this conclusion ignores the steps necessary to reach the new land. This conclusion focuses solely on prospecting discovered land and ignores the broader processes of creation and invention. Sometimes the voyage leads nowhere and the island is in fact just a mirage. Other times perhaps the actual island is something completely different from the imagined one. Regarding patents, the Supreme Court has stated that intellectual property is the reward for a successful hunt, and not a tool for a hunting expedition.[22] The Court's admonition is a limiting principle and not a statement that intellectual property should be viewed as equivalent to real property. As a social arrangement, the activities that intellectual property governs are precisely the processes of creation and invention and not simply the management of what has been captured.

Readers troubled by the use of land in my fable may just as easily transport our voyager into a lab or a library, where she looks up from the established scientific and literary canon out toward unsolved problems and unwritten compositions on the horizon. To focus too squarely on whether intellectual property is like land, or whether intellectual property is even property, misses the point. Intellectual property is like property to the extent that both create a system of rights that determine what can or cannot be done with a resource. However, the resource at issue and the underlying uses of the resource may be completely different. In my fable, it is not key that my heroine starts and ends up on land. What is key is how she gets from one place to another, a process that entails imagining different ways to fashion the voyage, planning the actual voyage, taking it, and the settlement upon arrival. As mentioned before, this process may well overlap with that of managing the commons itself. However, the overlap should not distract from the different types of problems intellectual property and real property are intended to solve.

Interpreting the fable in this way may elicit the following type of response from real property scholars. Real property is also about developing new uses and deriving new values from land. The law of capture and appropriation informs how rights in land and other resources attendant to land are created.[23] Therefore, the criticism would go, real property and intellectual property are actually closer

[22] Brenner v. Manson, 383 U.S. 519, 534-35 (1966).

[23] *See* Pierson v. Post, 3 Cai. 175, 175 (N.Y. Sup. Ct. 1805); Abraham Drassinower, *Capturing Ideas: Copyright and the Law of First Possession*, 54 CLEV. ST. L. REV. 191, 192-93 (2006) (discussing *Pierson v. Post*).

than my fable suggests. This criticism, however, confuses the level of generality at which real property and intellectual property overlap. Certainly, in a very broad sense, aspects of real property and intellectual property are about capture and discovery. Nevertheless, to conclude from this broad similarity that intellectual property and real property create the same set of rights ignores the ways in which hunting for natural resources, like oil, is different from searching for a new drug or producing a movie. The point of my fable is that the activity at stake needs to inform our understanding of law. Furthermore, the nature of the activity for the intellectual property commons is distinguishable from the canonical story of the commons as told by Hardin. The social arrangements of intellectual property need to be based on an appreciation of the activities of invention and creation, in their varied market, industrial, and social contexts.

My goal in this subsection was to present a counter-narrative to the tragedy of the commons. I designed this counter-narrative to highlight the differences between intellectual property and real property as social arrangements to regulate the commons. Building on my counter-narrative, distributive justice is an important normative goal in designing the social arrangements of intellectual property.

B. Governing the Commons Through the Goals of Distributive Justice

Hardin recognized that there were two ways to counter the tragedy of the commons, technical solutions and social arrangements. Scholars after Hardin added legal institutions, particularly property rights, as another instrument to avoid the tragedy.[24] My fable of the commons also lends itself to technical, legal, and social arrangements to regulate the processes of creation and invention. What normative principles guide the design of technical, legal, and social arrangements? Hardin discussed two possible principles, what he called "morality" and what he described as "utilitarianism."[25] His appeal to morality stemmed from the failure of utilitarian solutions. Analogously, my fable of the commons invites consideration of two normative principles, utilitarianism (which I will refer to below as "wealth or welfare maximization") and distributive justice. In this subsection, I argue that utilitarianism alone is not sufficient in addressing my fable of the commons. Distributive justice must be considered in addressing the problems posed by my fable.

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[24] *See, e.g.*, BARZEL, *supra* note 4.

[25] Hardin, *supra* note 1, at 1243-44.

As a descriptive matter, the fable of the commons highlights the pursuit of the new as the principal activity of the intellectual property commons. The activities of creation and invention introduce the challenge of resolving conflicting claims among individuals who reach the new world. Will all who reach the island hold resources jointly, or will there be some rule of priority, such as first to arrive or first to cultivate, to determine ownership rights? What rules will govern the race itself? Will it be a free for all, or will ordinary rules of tort and contract law govern how individuals structure their relationships during the trek? Most important of all, how broad or narrow will these claims be? For example, under a first to arrive rule, will the first to arrive have claims over the entire island or only the portion that she first traversed? If the claim is only over a narrow portion of the island, how can she expand or transfer these claims? The simple fable gives rise to a complex web of relationships and the problem of discovering rules to regulate them. The rules of governance could reflect principles of wealth or welfare maximization, however wealth or welfare are defined. Nevertheless, the limits of wealth or welfare maximization that Hardin pointed out are apparent in the fable of the commons. Hardin observed that the tragedy of the commons arose from an increase in population. Wealth or welfare maximization requires consideration of a sum of measures of individual wealth or welfare over all the individuals in the commons.[26] This aggregate measure could in turn be averaged over the total number of individuals to arrive at a per capita index. Whatever metric is used, the measure of social well-being depends upon the resources of the commons and the number of individuals in the commons. Implementing the goal of wealth or welfare maximization requires determining both the resources and the number of people in the commons. Two instruments had to be determined simultaneously in order to maximize wealth or welfare. Hardin concluded that policy measures to curb the tragedy of the commons would be far from simple and would have to go beyond mere policy instruments such as improved technologies and more stable markets.[27] Because, as Hardin observed, the policy measures would have to be quite complex, a change in morality would be needed to avoid the tragedy of overpopulation in the commons.[28]

[26] *Id.* (addressing question "What shall we maximize?").

[27] *Id.* at 1244.

[28] *Id.* at 1245-46.

Hardin's leap to morality is somewhat of a facile one. Property rights, appropriately defined and enforced, could in theory resolve both the resource allocation problem and the population question.[29] For example, if the state divided the commons among its individual members and society respected individual property rights over resources and autonomous decisions over fertility and child rearing, this would ease some of the pressures on the commons.[30] What I have described is a form of classic liberalism, and although far from perfect, this form of legal, economic, and social arrangement has features that would resolve Hardin's quandary and potentially support wealth or welfare maximization. Of course, classic liberalism may itself be an example of the type of social arrangement that Hardin had in mind when he appealed to the concept of morality. Nonetheless, two points are clear. First, Hardin was correct in recognizing the limits of wealth or welfare maximization. Second, he was also correct that some normative criteria beyond wealth or welfare maximization were necessary in order to satisfactorily resolve his tragedy of the commons. His choice of the term "morality" was perhaps an unfortunate one given how loaded the word is in our current political and social climate. I will refer to this alternative to wealth or welfare maximization as "distributive justice" in my discussion of the limits of wealth or welfare maximization for the fable of the commons in understanding intellectual property.

The fable of the commons poses two problems for wealth or welfare maximization as a normative guide for governance. The first is the problem of progress; the second is the problem of markets. The problem of progress is quite close conceptually to Hardin's analysis of population and wealth or welfare maximization. As population expands, so does the objective function for wealth or welfare maximization. Similarly, as new resources are introduced into the commons, the object of wealth or welfare maximization also expands. The normative criterion becomes a moving target, resulting in indeterminate and, at some level, incoherent rules for governance. I elaborate on this criticism below. The problem of markets is related to

[29] *See generally* Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972) (presenting role of property rights in resolving information costs).

[30] *See generally* Steven N.S. Cheung, *The Enforcement of Property Rights in Children, and the Marriage Contract*, 82 ECON. J. 641 (1972) (presenting property rights approach to reproductive decisions within family); Nancy Folbre, *Of Patriarchy Born: The Political Economy of Fertility Decisions*, 9 FEMINIST STUD. 261 (1983) (analyzing politics and economics of fertility choices).

the problem of progress. As I discuss more fully below, using markets to facilitate wealth or welfare maximization may fail because the structure of markets will itself affect the proper definitions of wealth and welfare. Once again, relying on wealth or welfare maximization alone leads us to indeterminacy at best and incoherence at worst. The problems of progress and markets illustrate the need to consider normative criteria, such as distributive justice, to fully determine the governance structure for the intellectual property commons.

Progress, or the introduction of new resources into the commons, makes wealth or welfare maximization a trivial exercise. If someone in the commons benefits from the new resource, then the new resource should be allowed into the commons. If the new resource creates harms, then the familiar analysis of property rights, internalization of externalities, and transaction costs apply to contain the harms of the new resource.[31] In the fable of the commons, if the voyager benefits from the new island and the new island is otherwise not harmful, then, under the criteria of wealth or welfare maximization, the rules of governance should allow the new island to become part of the commons. Under the criteria of wealth or welfare maximization, the commons should be ever-expanding regardless of who does the creating or the inventing, or who obtains the benefit of the creation and invention. In this sense, wealth or welfare maximization is not a helpful criterion for commons management. It tells us that the commons should be allowed to grow, but not how it should grow. The indeterminacy of wealth or welfare maximization should not be surprising. Economists are aware that there are several allocations of resources that may be equally desirable from the perspective of wealth or welfare maximization, unless an interpersonal comparison of well-being is permitted.[32] Furthermore, various critical theorists have questioned the coherence of the concept of wealth or welfare as normative guideposts.[33] The problem of progress illustrates both of these styles of criticisms.

The familiar problem of pharmaceuticals provides a good example of the problem of progress for wealth maximization. Suppose Ezra has a life-threatening disease. Suppose Mercury discovers a pharmaceutical product that can cure the disease. Under the criteria of wealth or welfare maximization, governance rules should allow this

[31] *See* RICHARD CORNES & TODD SANDLER, THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS 5 (2d ed. 1996).

[32] *See* ROEMER, *supra* note 10, at 14-15; Arrow, *supra* note 10, at 136-37.

[33] *See* ELIZABETH S. ANDERSON, VALUE IN ETHICS AND ECONOMICS 60-61 (1993) (comparing and contrasting consequentialist and expressive theories of value).

new product to be introduced into the commons. However, there is no requirement that Ezra, or anyone else with his disease, receive the drug in order to satisfy the criteria of wealth or welfare maximization. Furthermore, it is not clear what form of governance would follow from the criteria of wealth or welfare maximization. There are several possibilities. First, Mercury could receive the right of full appropriation as a first discoverer. Alternatively, Mercury could receive the right of partial appropriation, subject to some expropriation by someone else in the commons who has a claim to the drug. Lastly, Mercury could receive the right with no obligation to transfer the drug to someone else desiring to acquire it. All progress tells us is that "new" maximizes wealth or welfare, but it does not provide much guidance in how the new island of my fable should be governed.

The institution of markets exacerbates, rather than resolves, these issues. In the example of the infirm Ezra and the innovator Mercury, the call for wealth or welfare maximization would suggest that a market transaction should facilitate the transfer of the life-saving drug to the neediest user. Because Ezra's life is at stake, it is reasonable to assume that Ezra would be willing to pay any amount for the drug, subject to a wealth constraint. Mercury would be willing to accept any amount that would cover the average costs of producing the drug in order to recoup its investment and make some return. In theory, and in practice, some wealth or welfare enhancing transaction should occur. However, what if Mercury holds out and seeks a price higher than Ezra's willingness to pay? Perhaps someone much wealthier than Ezra does obtain the drug. The resulting transaction would maximize wealth and welfare, but how does Ezra's well-being fit into the calculus? At one level, Ezra's well-being is irrelevant. His not being able to purchase the drug would be equivalent to the drug not ever having been invented. Either way, Ezra would be without the drug and would have succumbed to the disease. There is something troubling with the criteria of wealth or welfare maximization in allowing resources to be simply transferred to the highest bidder. One solution would be to allow a system of price discrimination that permitted sale of the drug for different prices to different individuals. Assuming that the difficult incentive problems of price discrimination could be resolved, there is still the issue of choosing between two different market structures, one where the highest demander obtains the drug and one where the drug is sold to different individuals at different prices. That choice requires consideration of some set of criteria other than wealth or welfare maximization.

Using markets as a governance institution to implement wealth or welfare maximization requires some understanding of wealth or welfare prior to the institution of markets.[34] Property rights, as defined and enforced by legal institutions, may facilitate the definition of wealth or welfare. However, the structure of markets will also determine how wealth or welfare is both defined and allocated. For example, in a perfectly competitive market, buyers and sellers respond solely to price signals, and price adjusts to allocate resources based on buyers' willingness to pay and sellers' willingness to accept.[35] Wealth or welfare is measured by how much surplus consumers earn by buying products at a price less than their willingness to pay, and by how much surplus producers earn by selling products at a price above their willingness to accept. By contrast, in a differentiated product market, one in which buyers and sellers respond to both the price of a product and its quality, market dynamics and measures of wealth or welfare would be more complicated.[36] Buyers would care not solely about what price they paid for a product, but also what quality of product they could obtain at a given price. Similarly, sellers would care about the price they could obtain given the costs of providing a product of a certain quality. The institution of markets and the criteria of wealth or welfare maximization are not independent of each other. The definition of wealth and welfare will depend upon what property rights and market structure define the particular institution of markets implemented in the commons.

My point of indeterminacy and incoherence of focusing solely on utilitarianism as a normative guidepost is not to turn the problem of governance for the intellectual property commons into an intractable mess. Rather, I am making the more modest point that wealth or welfare maximization alone cannot guide the choice of what institutions should be implemented to govern the commons. This point mirrors Hardin's criticism of purely technical solutions to the tragedy of the commons. However, unlike Hardin, who appealed to a vague, undefined concept of morality as the guiding principle to resolve the tragedy, I am suggesting that we need to consider distributive justice as a normative criterion for institutional design. To understand how distributive justice can provide such a criterion, I will return to my fable of the commons to more carefully elucidate the

[34] *See* JULES COLEMAN, MARKETS, MORALS AND THE LAW 108-12 (1998); DAVID THROSBY, ECONOMICS AND CULTURE 20-24 (2001).

[35] *See* CORNES & SANDLER, *supra* note 31, at 4-6.

[36] *See* Christopher S. Yoo, *Copyright and Product Differentiation*, 79 N.Y.U. L. REV. 212, 252-53 (2004).

specific distributional issues raised by the activities of the intellectual property commons. I argue next that my fable of the commons, rather than leading to a fairly incoherent appeal to morality, invites us to consider intellectual property in terms of three distributional concerns: distribution among creators, distribution among creators and users, and intergenerational distribution.

II. THE DIMENSIONS OF DISTRIBUTIVE JUSTICE

Like the tragedy of the commons, the fable presented in Part I presented a stylized description of the intellectual property commons. This stylized description illustrated why the normative principles of distributive justice, and not solely wealth or welfare maximization, should inform the governance of the commons. This Part elaborates on how distributive justice can aid in shaping the governance structure of the intellectual property commons. The key insight from the fable of the commons is that governance structures should focus on the activities that expand the commons, rather than use of the resources of the commons itself. Consequently, in pursuing the goals of distributive justice, we should focus on the distributional issues raised by the acts of creation and invention. I will focus on three sets of distributional issues: those among creators, those among creators and users, and intergenerational issues.

Before proceeding to an analysis of each of these three aspects of distributive justice, let me emphasize that I am being somewhat agnostic about the proper relationship between distributive justice and wealth or welfare maximization as normative guideposts.[37] My modest point is that wealth or welfare maximization alone cannot and should not guide us in creating governance structures for the intellectual property commons. This means that distributive justice goals may trump claims based solely on wealth or welfare maximization. The more difficult question is whether distributive justice goals can be decided separately from wealth or welfare maximization goals.[38] For example, one might argue that the initial allocation of rights should be made solely in order to maximize wealth or welfare with distributive

[37] See the argument in KAPLOW & SHAVELL, *supra* note 10, at 15-20 that legal rules should be based solely on welfare maximization with no consideration of fairness or distributive justice issues. For one criticism, see Jules L. Coleman, *The Grounds of Welfare*, 112 YALE L.J. 1511 (2003).

[38] *See* Michael I. Swygert & Katherine Earle Yanes, *A Unified Theory of Justice: The Integration of Fairness into Efficiency*, 73 WASH. L. REV. 249, 259-61 (1998). For a criticism, see Russell B. Korobkin & Thomas S. Ulen, *Efficiency and Equity: What Can Be Gained by Combining Coase and Rawls?*, 73 WASH. L. REV. 329 (1998).

justice goals being introduced afterwards to cure undesirable results from market and political processes.[39] Alternatively, one could argue that initial entitlements are based solely on distributive justice goals with governance institutions, such as markets and courts, designed to allow individuals to trade initial entitlements in order to ensure wealth or welfare maximization.[40] I am skeptical of this separation of distributional goals from efficiency goals. Economic theory teaches us that this separation is appropriate only under some extreme assumptions about preferences and technologies.[41] I adopt the conventional welfarist assumption in normative economics that for most problems we need to consider efficiency and distributive goals together, and design governance institutions to reach a desirable (i.e., politically justifiable) mix of efficiency and distributive justice.[42] What this mix is will depend upon the specific governance structures at issue. Because of this context dependence, I will focus exclusively on distributive justice goals in this Part. In Part III, I turn to four specific problems confronting the structure of the intellectual property commons and in the context of those four problems, I will highlight the interplay of efficiency and distributive justice as normative criteria.

A. Creators

The creative process demands consideration of distributive justice among creators. Intellectual property law can aid in resolving distributional conflicts among creators and in ensuring just and equitable outcomes. Creative works and useful inventions are the result of a mix of individual effort and talent. The problem is determining how the rules of the intellectual property commons reward effort and talent.

One purported set of rules reflect the principles of originality[43] and full appropriability.[44] Under these two principles, creators are

[39] *See, e.g.*, Korobkin & Ulen, *supra* note 38, at 332 (making case for separating efficiency and distributive justice concerns).

[40] For one example of this approach, see COLEMAN, *supra* note 34, at 122-24.

[41] *See* Theodore C. Bergstrom & Richard C. Cornes, *Independence of Allocative Efficiency from Distribution in the Theory of Public Goods*, 51 ECONOMETRICA 1753, 1754 (1983).

[42] *See* AMARTYA SEN, ON ETHICS AND ECONOMICS 38-40 (1987).

[43] *See, e.g.*, David Nimmer, *Copyright in the Dead Sea Scrolls: Authorship and Originality*, 38 HOUS. L. REV. 1 (2001) (analyzing concept of originality in translation of ancient scriptural texts).

[44] *See* Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1032 (2005).

rewarded fully for wholly original works that are not the product of copying of other creators or of artifacts in the public domain. By fully rewarded, I mean that the creator obtains the full social value of her work through both sales of the work and licensing of the rights. The conventional argument is that originality and full appropriability of social value will ensure efficient outcomes by allowing creators to capture the full social benefit of their work without appropriation from other sources.[45] In turn, the introduction of original creations into the marketplace expands the commons. The case is also made that originality and full appropriation are just and fair principles for governing the intellectual property commons, because each creator is able to capture the fruits of his individual labor. The principles of originality and full appropriability ignore important distributional conflicts among creators and may undermine the goals of expanding the intellectual property commons.

The first focus of my criticism is on the principle of full appropriability of social value. The argument in favor of full appropriability follows from the Pigovian analysis of externalities.[46] According to the economist Arthur Pigou, externalities arise when social costs or benefits differ from private costs and benefits.[47] For example, in the case of pollution, the social costs of harmful waste are greater than the private costs of the waste borne by the producer. If the producer had to bear the full social cost of the waste, then the efficient amount of pollution would occur. Analogously, when a new work is created for the commons, the social benefits are greater than the private benefits. Consequently, the individual creator has to appropriate the full social benefit in order to ensure that the efficient level of creation would occur. In this Pigovian mode, the argument for full appropriability is based solely on efficiency grounds. Robert Nozick has made the case for full appropriability on distributive justice grounds, arguing that the creator has the right to recoup the gains from the fruit of his labor.[48] Full appropriability is justified, on the one hand, as a means of reaching efficient allocation of benefits and costs and, on the other, as an entitlement to one's own labor.

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[45] *Id.* at 1032.

[46] *See generally* ARTHUR C. PIGOU, THE ECONOMICS OF WELFARE 192-96 (1932) (describing use of taxes and subsidies when there is divergence between private and social marginal product). An externality is a benefit or cost that falls on a third party that is not party to a given transaction. *See* CORNES & SANDLER, *supra* note 31, at 39.

[47] *See* CORNES & SANDLER, *supra* note 31, at 40-42.

[48] ROBERT NOZICK, ANARCHY, STATE AND UTOPIA 150-55 (1974).

The arguments in support of full appropriability fail on both efficiency and distributive justice grounds. The efficiency justification, to the extent that it is based on the Pigovian theory of externalities, is subject to Ronald Coase's criticism. Specifically, Coase argued that externalities can be internalized through bargaining among the effected parties, regardless of who has the right to be compensated or the obligation to pay a fine.[49] In the case of negative externalities, the case that Coase actually considered in *The Problem of Social Cost*,[50] the social harms of waste can be internalized through contractual negotiations that determine how much waste can be generated and how the generated waste can be cleaned. While Coase did not directly consider the case where social benefits are greater than private benefits, his insights are equally applicable to that scenario.[51] As long as the creator can negotiate the transfer of rights in his creation, then contractual negotiations will allow the creator to appropriate whatever returns society is willing to pay for use and enjoyment of the creation. Full appropriation is not necessary for the creation and dissemination of the work. As with any other endeavor, as long as the creator earns more than his alternative to being an author or inventor, he will choose the activity of creating.[52] Partial appropriation is more efficient than full appropriation as long as the appropriation is greater than alternative uses of the creator's time.

The focus on opportunity cost, rather than social benefit, illustrates why the principle of full appropriability can lead to inefficient and unjust outcomes. Imagine the following example. I realize one day that my teaching intellectual property law to my students actually makes them better attorneys. I calculate from this observation how much more my students earn as a result of my activity. Under full appropriability, I could logically make the claim that I should obtain the surplus that my students will earn as attorneys as a result of the training I have provided. Assuming we could resolve the computational problems that my claim raises (and this is, of course, an

[49] R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 8-9 (1960) (discussing Sturges v. Bridgman, (1879) 11 Ch.D. 852, case involving negative externalities).

[50] *Id.* at 19-22.

[51] *See* Lemley, *supra* note 44, at 1038, 1041 (pointing out that Coase was considering case of negative externalties where social cost was greater than private cost).

[52] *See* DONALD E. CAMPBELL, INCENTIVES: MOTIVATION AND THE ECONOMICS OF INFORMATION 315 (1995) (discussing role of opportunity cost in efficient resource allocation); S.J. Leibowitz, *Copying and Indirect Appropriability: Photocopying of Journals*, 93 J. POL. ECON. 945, 946 (1985) (discussing importance of appropriation for creators).

implicit assumption of those who advocate for full appropriation), my claim also undermines the claims of my students who seek to become attorneys in the first place. But, of course, the flaw in my reasoning is that efficiency requires only that I obtain enough of a return to make my choice as a law professor more profitable than my alternative opportunities (and as all law professors know, this return may include intangibles such as job satisfaction as well as monetary returns). The principle of full appropriability would not only derail the goal of efficiency by ignoring opportunity cost, but it would also increase transaction costs in market exchange as market participants attempt to appropriate all the relevant surplus in their respective transactions. Ironically, full appropriability would undermine the market, one of the key institutions for the maintenance of efficiency.

Nozick's distributive justice arguments in favor of full appropriability may cure the anti-efficiency tendencies of Pigovian justifications for full appropriability. Nozick bases his justification on the entitlement of individuals in the fruits of their own labor, not efficiency or attendant institutions, such as the market.[53] The problem, however, is that the entitlement in one's labor is intimately connected to the institution of the market and exchange.[54] One works to make a living, and unless one finds comfort in simply retaining, rather than exchanging, the fruits of one labors, it is not clear why the entitlement in one's labor is a desirable normative end. Perhaps there is value in autarky, but it would be difficult to deny that realizing the full value of one's entitlement in the fruits of labor requires engaging in market exchange to some extent. However, full appropriability, as I argued above, works against the functioning of the market. Therefore, Nozick's argument for full appropriability is a moral claim, rather than one consistent with the instrumentalism of market economics. However, even if full appropriation is made as a purely moral claim, the instrumental role of entitlements implies that at some point full appropriability has to give way in order to make the claim to the fruits of one's labor a meaningful one.

In short, the principle of full appropriability is neither efficient nor just. The same conclusion applies to the principle of originality. Much has been written, and rewritten, about the emptiness of originality given the important role of borrowing on the creative and inventive process. I will not rehearse those arguments here, but

[53] NOZICK, *supra* note 48, at 151 (laying out axiomatic approach to distributive justice).

[54] *Id.* at 248-49.

simply acknowledge their influence in a footnote.[55] My attention here turns to the distributive justice arguments supporting originality. The concept of originality advances legal protection to works that originate from the creator without borrowing from the public domain or from other creators.[56] Sanctioning acts of copying through broad definitions of infringement by reproducing, adapting, and performing and through narrow protections such as fair use also promotes originality.[57] The principle of originality rewards creative activities that do no derive from other sources unless these sources are compensated in some fashion, such as licensing or purchase. In this way, originality is derived from the principle of full appropriability and suffers from the same criticisms.

Originality, however, is flawed for reasons distinct from the problems with full appropriablity. Originality requires the identification of one creator or set of creators with a given work. This assumption has been questioned as incorporating the myth of the romantic author and ignoring the social context of creation.[58] These criticisms are all worth acknowledging, but the more compelling difficulty with the principle of originality is the arbitrariness of the conclusion that the author is entitled to the copyright from the perspective of distributive justice. If originality reflects Nozick's notion of entitlement, then the market-based criticisms apply equally here. If there is some other basis in distributive justice for the mapping, then I am frankly baffled as to what that foundation would be. The most sensible argument is that in order to have an effective system of legal entitlement, originality requires a clearly delineated author or set of authors. However, this is an argument for efficient administration, rather than one of distributive justice. At best, this

[55] *See, e.g.*, JAMES BOYLE, SHAMANS, SOFTWARE AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY (1996) (now-classic criticism of romantic authorship); THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE (Martha Woodmansee & Peter Jaszi eds., 1994) (critique of romantic authorship from perspective of literary theory).

[56] *See, e.g.*, Alan L. Durham, *Speaking of the World: Fact, Opinion, and the Originality Standard of Copyright*, 33 ARIZ. ST. L.J. 791 (2001) (providing overview of legal doctrine of originality).

[57] *See* 17 U.S.C. § 107 (2006). Fair use is a judicially created doctrine that has been codified into the Copyright Act of 1976 and allows users to copy, adapt, publicly perform, publicly display, or distribute copyrighted materials under some situations. *See, e.g.*, Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, at 134, 136.

[58] *See generally* Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C. L. REV. 547 (2006) (presenting culture of intertextuality and borrowing).

justification is derived from some notion of entitlement with all the accompanying problems created by that presumption.

My argument has both negative and positive dimensions. The negative portion of my argument questions the justifications for the principles of full appropriability and originality in the normative goals of efficiency and distributive justice. The positive, and more important, part of my argument shows that distributive justice goals do play a role in the design of the intellectual property commons. Furthermore, some limitations on full appropriability and originality may be necessary for recognizing distributive justice among creators. What this conclusion means in practice is the subject of Part III, in which I apply my analysis of distributive justice to the problems of fair use, secondary liability, antitrust, and traditional knowledge. To better understand these problems, we must also consider two other aspects of the normative goal of distributive justice: distribution among creators and users, and intergenerational justice.

B. Creators and Users

The relationship between creators and users[59] in the intellectual property commons is similar to that between suppliers and demanders of resources in other arenas.[60] The conflict between suppliers and demanders is resolved most often through the institution of the market, supplemented by other institutions that aid in allocating resources that cannot be fully commodified (e.g., universities providing education), or that correct inequitable market distributions (e.g., charitable organizations providing humanitarian relief).[61] In the intellectual property commons, the distributional conflict between creators and users is reflected in three issues: the principles of full

[59] For a discussion of the lack of presence of the user in copyright law, see generally Julie E. Cohen, *The Place of the User in Copyright Law*, 74 FORDHAM L. REV. 347 (2005). Professor Cohen points to four activities that constitute use: consumption, communication, self-development, and creative play. *Id.* at 370. My focus in this section on supply and demand may seem impoverished in comparison to her rich description. My point, however, is not to reduce the conception of use in intellectual property to demand in the economic theory of the markets. Rather, I want to illustrate the difficulties in constructing markets in order to fully represent the values of users.

[60] *See, e.g.*, CHARLES E. LINDBLOM, THE MARKET SYSTEM: WHAT IT IS, HOW IT WORKS, AND WHAT TO MAKE OF IT 35-40 (2001) (describing instrumental theory of markets); Jean-Pascal Benassy, *On Competitive Market Mechanisms*, 54 ECONOMETRICA 95 (1986) (presenting technical analysis of markets).

[61] *See* LINDBLOM, *supra* note 60, at 266-72; MARGARET JANE RADIN, CONTESTED COMMODITIES 46-53 (1996).

appropriability and originality, the tension between willingness and ability to pay, and the problem of pricing.

The set of users include creators, and, given the overlap, it is not surprising that the issues of originality and full appropriability should arise in the distributional conflict between creators and users. There are, of course, important differences. Among creators, the key issue is the allocation and distribution of labor and talent for the creative process. Between creators and users, the key issue is the allocation and distribution of final created products. The criticisms of full appropriability and originality apply even more forcefully to the latter issue. The supplier does not stake a claim appropriating the full value of what he supplies in any market. The supplier charges a price for transferring a commodity to the demander. The price, by definition, has to be enough to cover the supplier's costs in producing and distributing his wares and be less than or equal to what the demander is willing to pay for the product. Therefore, any claim of full appropriability might undermine the claims of other participants in the marketplace, as argued above.

Furthermore, there may be strong reasons for questioning the use of the market institution in the intellectual property commons. A familiar criticism of the market is its emphasis on willingness to pay rather than ability to pay.[62] A related criticism is the market's emphasis on the satisfaction of wants rather than needs.[63] These criticisms would also apply to intellectual property markets. For example, in the case of pharmaceuticals, market mechanisms for the distribution and allocation of life-saving drugs may not ensure equitable distribution and distribution to the most needy. Not surprisingly, the distributional concerns of other markets also confront intellectual property markets.

More compelling are the limitations of intellectual property markets, beyond the conventional criticisms of markets for ignoring needs and rationing based on willingness to pay. In typical markets, price serves as an important mechanism for matching buyers and sellers. For specific transactions, the price mechanism serves to match trading partners on differences between willingness to pay and willingness to accept. Taken together, this matching ensures that buyers in the marketplace earn, on the aggregate, a consumer surplus. This result occurs because some consumers would have been willing to pay more

[62] *See, e.g.*, Jason F. Shogren et al., *Resolving Differences in Willingness to Pay and Willingness to Accept*, 84 AM. ECON. REV. 255 (1994).

[63] *See* AMARTYA SEN, DEVELOPMENT AS FREEDOM 87-110 (1999).

than prevailing market price. This matching also ensures a producer surplus, which results from the willingness of some sellers to accept less than the prevailing market price. The efficiency of the market is reflected in the maximization of consumer and producer surplus.[64] The problem is that in intellectual property markets, the price mechanism may not work the way it is supposed to for two reasons.

First, there may be a limited number of suppliers of a work protected by intellectual property. It is well accepted that an intellectual property right does not confer a market monopoly, because there may be several substitutes for the product.[65] It is equally true, however, that intellectual property markets will not have homogenous products that are perfect substitutes, as required for perfectly competitive markets.[66] One song will be different from, as well as the same as, another song. Chemical and industrial processes will also have similarities and differences. As a result, intellectual property markets will clear not solely based on price, but also on other characteristics, such as the quality of the product or service. Therefore, the market may not lead to fully efficient outcomes and may actually exclude individuals who would otherwise be willing to pay the prevailing price based on the quality or type of product provided to the marketplace.[67] Pricing mechanisms may not ensure efficient trades and distributional balance between consumer surplus and producer surplus.

Second, intellectual property markets involve not only the transfer of goods and services, but also the licensing of legal rights. These rights are often allocated using royalties and other pricing arrangements and through the transfer of subsidiary rights, for example claims as to service or warranties. These contractual arrangements serve multiple functions, such as providing insurance or other services in addition to the transfer of rights. Once again, given the dimensions of these contracts in addition to price, licensing arrangements will often suffer from problems of asymmetric information and strategic behavior. Therefore, there is no reason to

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[64] *See* LINDBLOM, *supra* note 60, at 125-28.

[65] *See, e.g.*, Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 VAND. L. REV. 1727, 1730-31 (2000) (stating patent ownership does not create monopoly).

[66] *See, e.g.*, Yoo, *supra* note 36, at 236-41 (presenting alternative to perfectly competitive model of markets).

[67] *See generally* Alex Hunter, *Product Differentiation and Welfare Economics*, 69 Q.J. ECON. 533 (1955) (presenting normative welfare economics of product differentiation).

think that the licensing markets will lead to the most efficient result or to a desirable distribution of producer and consumer surplus in the marketplace.[68]

Distributional justice issues inform the relationship between creators and users. Many of these issues are similar to those that arose among creators and to those that affect markets generally. Furthermore, the price mechanism may not be fully functioning in intellectual property markets, requiring more careful scrutiny of markets in the intellectual property commons. To illustrate these theoretical issues and to demonstrate their applicability to current debates, I explore the implications of these distributive justice issues for fair use, secondary liability, antitrust, and traditional knowledge in Part III.

C. Intergenerational Justice

At the heart of the fable of the commons is a narrative of how the commons expands. This expansion reflects progress, an admittedly loaded word. The U.S. Constitution speaks of progress, although it may not have the restraining force that some scholars endorse.[69] Outside the United States, the term "progress" does not have constitutional valence, but intrudes into intellectual property debates through the concepts of innovation and invention.[70] My argument is that progress can and should be understood in terms of intergenerational justice, meaning very broadly the distributional conflict between those who are alive currently and those who will be born. A more practical definition of intergenerational justice would focus on changes in background mores and technology that may make certain established modes of allocating and distributing resources questionable.

Intergenerational justice influences the intellectual property commons in three ways: changed technologies, changed markets, and changed values. New technologies may upset established ways of producing and distributing works of art. The VCR and file sharing are the two most salient examples of this phenomenon. Intellectual

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[68] *See generally* Michael L. Katz & Carl Shapiro, *On the Licensing of Innovations*, 16 RAND J. ECON. 504 (1985) (presenting model of diffusion of innovation through licensing, and limits of model).

[69] *See, e.g.*, Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272 (2004) (identifying intellectual property within regulatory authority of Congress).

[70] *See* Graeme W. Austin, *Valuing "Domestic Self-Determination" in International Intellectual Property Jurisprudence*, 77 CHI.-KENT L. REV. 1155, 1191-93 (2002).

property rules have to deal with new technologies, and the response can range from accommodation to extinction.[71] Considerations of intergenerational justice can inform how intellectual property rules can shape the adoption and diffusion of new technologies. Similarly, as markets change with the introduction of new products, intellectual property rules need to respond in a way that is responsive to the goals of intergenerational justice.[72] Finally, values may change, particularly on the relative merits of entertainment versus information or on the merits of different types of technologies.[73] Once again, considerations of intergenerational justice can guide intellectual property rules.

Having presented the case for distributive justice generally and three specific dimensions of distributive justice specifically, I turn now to the four specific applications to show how the normative goal of distributive justice can instruct the solution of particular intellectual property problems. As mentioned above, I consider four problems: fair use, secondary liability, antitrust, and traditional knowledge. For each of these problems, I make the case for why consideration of distributive justice is necessary and how the three types of distributive justice can shape our search for a solution.

III. DISTRIBUTIVE JUSTICE IN PRACTICE

I have made the case for two abstract points in this Article. The first is that the activities in the intellectual property commons are different from those in Hardin's commons. This observation, made through the fable of the commons, is the basis for my second point that the normative guidepost of distributive justice, in addition to efficiency, should inform the governance structure for the intellectual property commons. These two abstract points have concrete applications for four areas of intellectual property law and policy: fair use, secondary liability, antitrust, and traditional knowledge.

Each of these four examples demonstrates how a narrow focus on efficiency has reshaped the law to make intellectual property more proprietary and less public spirited. The reasons for this shift have been explored elsewhere in depth.[74] Unfortunately, the privatization of intellectual property law has sacrificed the important distributive

[71] *See* ASHISH ARORA ET AL., MARKETS FOR TECHNOLOGY: THE ECONOMICS OF INNOVATION AND CORPORATE STRATEGY 8-10 (2001).

[72] *See* LAWRENCE LESSIG, FREE CULTURE 48-52 (2004).

[73] *See* SIVA VAIDHYANATHAN, THE ANARCHIST IN THE LIBRARY 97-114 (2004).

[74] *See generally* Shubha Ghosh, *Deprivatizing Copyright*, 54 CASE W. RES. L. REV. 387 (2003) (arguing that copyright is means to privatize cultural activities).

justice issues at stake in each of these examples. An identification of the activities implicated in each of these examples, and the role of these activities within the fable of the commons, will reintroduce the distributional conflicts among creators, creators and users, and generations that have been ignored in the intellectual property debate.

A. Fair Use: Allocating Surplus Among Creators and Users

The doctrine of fair use allows copying, distributing, adapting, performing, or displaying of a copyrighted work without permission from the copyright owner.[75] Fair use creates a category of activities that are infringing but justified. Ever since its first formal recognition in the 1841 case *Folsom v. Marsh*, the precise question has been: when is copyright infringement justified?[76] Doctrinally, Judge William Story in *Folsom* suggested a set of factors that would support justification, such as the effect on the market for the copyrighted work, the amount taken, the nature of the work infringed, and the purpose of the infringement.[77] Theoretically, licensing failure has been a justification for fair use.[78] Licensing failure may stem from the existence of transaction costs that make it difficult to negotiate the requisite license.[79] The presence of high transaction costs can explain why spontaneous and de minimis forms of copying are deemed fair.[80] The licensing model is also deemed to fail when the public interest in disseminating the work outweighs the private interest in preventing licensing.[81] Parody is a strong example of the public interest explanation for fair use.[82] Understandably, a copyright owner would often be hesitant to allow his work to be parodied. However, the criticism and creativity of parody may benefit the public. Therefore,

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[75] *See* 17 U.S.C. § 107 (2006).

[76] 9 F. Cas. 342 (C.C.D. Mass. 1841) (No. 4,901).

[77] *Id.* at 349.

[78] Wendy J. Gordon, *Excuse and Justification in the Law of Fair Use: Transaction Costs Have Always Been Only Part of the Story*, 50 J. COPYRIGHT SOC'Y U.S.A. 149, 151-52 (2003).

[79] 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, 1627-36 (1982); 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, 130-31(1997).

[80] Lydia Pallas Loren, *Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems*, 5 J. INTELL. PROP. L. 1, 26-27 (1997).

[81] *See* Samuelson, *supra* note 57.

[82] *See, e.g.*, Tyler T. Ochoa, *Dr. Seuss, the Juice and Fair Use: How the Grinch Silenced a Parody*, 45 J. COPYRIGHT SOC'Y U.S.A. 546 (1998).

the presence of parody is an important factor to consider in determining whether an infringing use is justified.[83]

The doctrinal and theoretical bases for fair use assume market failure as the touchstone for justifying infringement.[84] Consequently, fair use is often understood as a means of promoting efficiency when an impediment prevents the market from creating surplus. This efficiency-minded understanding of fair use explains in part the tendency to view fair use narrowly, finding fair use only when markets clearly fail.[85] Furthermore, the possibilities of creating markets for licensing, such as through copyright intermediaries, strongly militates against fair use.[86] Conceptually, it is odd to think of fair use, an exception to copyright, as a correction to market failure, because copyright itself is a response to a failure in the market for informational public goods. To think of fair use as a result of copyright failure while copyright is a result of market failure tortures the dichotomy between the market and the intervention of law.

A more coherent understanding of fair use would see it as an alternative licensing as a means of promoting the dissemination of informational public goods.[87] Fair use recognizes that infringing uses occur in many institutional settings, such as the university or the private home, and that licensing may not be appropriate or feasible as a means to allow these uses. Therefore, these infringing uses are justified under the law. The difficult issue in this formulation is the meanings of "appropriate" and "feasible." It would be an error to reduce these touchstones solely to an examination of transaction costs. As the current debate over digital rights management indicates, even when transaction costs for licensing are quite low, there is still great hesitancy in turning all information into a licensable commodity.[88]

The theory of distributive justice provides some guidance in determining what is appropriate and feasible. As discussed above, intellectual property law can determine the distribution of resources among creators and between creators and users. Fair use is one example of how the law helps to distribute resources for creative activity. If licensing is the only way to distribute informational public goods, then, effectively, the copyright owner can capture a return from all potential uses of a work. This view of licensing is consistent with

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[83] *See* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 591-94 (1994).

[84] *See, e.g.*, Gordon, *supra* note 79.

[85] *See* Ghosh, *supra* note 74, at 484-91.

[86] *See* Am. Geophysical Union v. Texaco Inc., 60 F.3d 913, 929 (2d Cir. 1994).

[87] *See* Gordon, *supra* note 78, at 170-71.

[88] *See* Merges, *supra* note 79, at 134-35.

full appropriation. However, full appropriation is itself inconsistent with market allocations and is harmful to the process of creation.[89] Fair use recognizes that there are some uses of a copyrighted work that the copyright owner is not entitled to appropriate. Therefore, the justification of fair use serves as an important limitation to the misguided notion of full appropriation.

How can distributive justice inform the doctrine of fair use? Because at the heart of fair use is the issue of how to divide up the returns from a newly created work among creators and between creators and users, it should not be a surprise that the fair use doctrine has not been readily cabined within clear rules.[90] Fair use is necessarily highly contextual, and application of the doctrine requires careful consideration of both the harms to the copyright owner and the benefits to the public from permitting some infringing uses. As a result, the current tendency toward clearer rules, particularly ones that favor the copyright owner, is misguided. More consistent with the goals of distributive justice is to view fair use as an equitable rule of reason that attempts, on a case-by-case basis, to divide resources in the intellectual property commons among its creators and users.[91]

B. Secondary Liability: Spanning Generational Divides

The introduction of a new copying technology invites two sets of legal problems. The first is the extent to which use of the technology for the purposes of copying is justified as fair use.[92] This set of legal issues was discussed in the previous section under the analysis of full appropriation. The second set of legal problems is the liability of the creator of the technology for aiding copyright infringement by the users.[93] If the use is justified, then the creator of the technology cannot be held legally liable. Therefore, fair use is one way to accommodate new copying technologies within the intellectual property commons. However, if fair use fails, the question of liability for the technology inventor squarely arises and must be addressed within the norms of the intellectual property commons.

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[89] *See* discussion *supra* note 44.

[90] *See* William W. Fischer III, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1661, 1678 (1988); Molly Shaffer Van Houweling, *Distributive Values in Copyright*, 83 TEX. L. REV. 1535, 1564-67 (2005).

[91] *See* Ghosh, *supra* note 74, at 485-86.

[92] *See, e.g.*, Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 448-56 (1984) (establishing substantial non-infringing use test).

[93] *See* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 380 F.3d 1154, 1160 (9th Cir. 2004), *vacated and remanded*, 545 U.S. 913 (2005).

Current copyright law and patent law converge on the issue of secondary liability, that is liability for facilitating intellectual property infringement.[94] Under both schemes, the inventor of technology that allows copyright or patent infringement is liable if either there is no substantial non-infringing use of the technology or if the inventor intentionally and actively promoted infringement.[95] The substance of the doctrine has implications for the development of new technologies. For example, the *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.* decision, which articulated this two-part standard for secondary liability, affected the viability of a particular peer-to-peer file-sharing service and has implications for the shape of file sharing more broadly.[96] Because of the effects of secondary liability on the development and dissemination of new technology, the doctrine needs to be carefully designed to be consistent with the intellectual property commons.

An obvious caveat is that the rules of secondary liability affect only technologies that facilitate infringement. Inventors are not inhibited in developing new technologies that do not aid infringement of existing patents and copyrights. Unfortunately, the line between infringing and non-infringing technologies may not be that clear. For example, many technologies, especially those tied to the Internet, facilitate copying, even if de minimis. Too strict a standard for secondary liability may have effects on a range of technology developers. Because of these effects on creators, the doctrine of secondary liability should be designed in light of distributive justice issues among creators. Because of the effects on technology dissemination and progress more broadly, intergenerational justice is also implicated. The issues of distributive justice among creators are similar to the controversy over full appropriability discussed in previous sections; therefore, I will focus solely on intergenerational justice here.

The doctrine of secondary liability attempts to accommodate the creation of new technologies that may undermine the economic return of existing technology and intellectual property holders.[97] The task of

[94] *See generally* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 545 U.S. 913, 125 S. Ct. 2764 (2005) (discussing roots of copyright secondary liability in patent law).

[95] *See id.* at 2770 (setting two-part test for secondary liability)

[96] *See id.* at 2794-96 (Breyer, J., concurring) (commenting on effects of court ruling on development of technology).

[97] *See, e.g.*, Ctr. for Democracy & Tech., *Interpreting* Grokster*: Limits on the Scope of Secondary Liability for Copyright Infringment*, 2006 STAN. TECH. L. REV. (providing

balancing the old with the new necessarily requires consideration of how to divide resources between two competing groups, those who have a stake in the established technology and those who value the improvements. There are many ways to handle these generational conflicts. The market may facilitate the transition from the old to the new as corporate entities buy and sell the disrupting technology.[98] Institutions such as the university or the consumer household may also play a role in adopting and disseminating new technologies.[99] The danger with secondary liability is that existing technology and intellectual property owners may use rights secured under the legal doctrine to enjoin the development of new technologies.[100] While existing technology and intellectual property owners certainly have an interest in the success of the new technologies, theirs is not the only voice to determine how new technologies enter the marketplace. Because future users and creators are necessarily absent from the legal and economic debates, the doctrine of secondary liability must judiciously give voice to these absent interests.[101]

From this perspective, the substantial non-infringing use test for secondary liability accommodates all the interests affected by new potentially infringing technologies. Under the substantial non-infringing use test, the court must consider all the possible uses of the technology and determine whether the non-infringing uses are substantial, both in quantitative and qualitative terms.[102] Although admittedly open-ended, the test has the advantage of placing the technology in a broader social context by focusing on its uses.

By contrast, the intent and purpose test, introduced by the Supreme Court in its 2005 *Grokster* decision, focuses on the planning and creative choices of the inventor. This focus creates a standard that is either ineffectual or too intrusive. Because intent and purpose have to be established by objective evidence, most inventors can avoid liability by simply avoiding conduct that could be construed as facilitating

overview of how *Grokster* decision affects development of new technologies).

[98] *See* ARORA, *supra* note 71, at 223; MARK WARSCHAUER, TECHNOLOGY AND SOCIAL INCLUSION 202-05 (2003).

[99] ARORA, *supra* note 71, at 270.

[100] *See, e.g.*, *Grokster*, 125 S. Ct. at 2794-96 (Breyer, J., concurring) (discussing role of copyright doctrine in promoting development of new technology).

[101] *Id.* at 2795-96 (illustrating how Court can give voice to these interests absent from legislative and market processes).

[102] *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417 (1984) (establishing and illustrating substantial non-infringing use test).

infringement.[103] For example, in *Grokster*, based on the Court's analysis of the record, the service could have avoided liability under the intent and purpose standard by not targeting users of the illegal Napster service or by indicating that the service could be used to copy or download copyrighted materials.[104] By allowing inventors to adopt such marketing tactics, the intent and purpose standard is an easy one to work around. The problem is that the standard might be used intrusively, and the fear of intrusion may dissuade inventors from pursuing the development of certain technologies. While the substantial non-infringing use test places the court's attention on the social context of technology, the intent and purpose test allows the court to assess the design and marketing choices of a particular inventor to assess whether the inventor acted with the intent and purpose to promote infringement. The close scrutiny of the choices and activities of creators may have a chilling effect on creators, and potentially favors the status quo in the intergenerational conflict over progress in new technologies. Distributive justice also informs the creation of new markets, the subject of antitrust scrutiny of intellectual property rights.

C. Antitrust: Natural and Cultural Monopolies and the Limits of Exclusivity in the Marketplace

Jurists, legislators, and scholars have debated the proper relationship between antitrust and intellectual property from the first enactment of federal antitrust law in 1890.[105] The tension is easy to state. Antitrust law imposes civil and criminal liability for exclusionary conduct that monopolizes a market. Intellectual property law, on the other hand, creates a time-limited right to exclude. These two bodies of law can be reconciled in three ways, each of which finds some acceptance in the case law. The first is to allow intellectual property ownership as a partial or complete defense to an antitrust claim.[106] The second is not to allow any special treatment for intellectual property under antitrust law.[107] The third is

[103] *See, e.g.*, *Grokster*, 125 S. Ct. at 2768-69 (presenting facts that would support finding intent to induce infringement).

[104] *Id.*

[105] *See* Philip B. Kurland, *Preface* to THE SUPREME COURT AND PATENTS AND MONOPOLIES, at x-xi (Philip B. Kurland ed., 1975); HANS B. THORELLI, THE FEDERAL ANTITRUST POLICY: ORIGINATION OF AN AMERICAN TRADITION 489 (1955).

[106] *See* Michael A. Carrier, *Resolving the Patent-Antitrust Paradox Through Tripartite Innovation*, 56 VAND. L. REV. 1047, 1052 (2003).

[107] *Id.* at 1053.

to identify some common policy goals shared by both antitrust and intellectual property law (such as the promotion of innovation or competition) and to interpret the laws accordingly.[108]

The third method of reconciliation best characterizes my approach. Antitrust law and intellectual property share the common goals of distributive justice by ensuring the proper distribution of resources among creators, between creators and users, and across generations. I have explained the goals of distributive justice for intellectual property. Antitrust law similarly polices the marketplace to ensure that resources are efficiently and equitably distributed among firms and between firms and consumers.[109] The implication of these shared goals is that intellectual property ownership should neither be the basis for an exemption nor serve as a basis for special treatment under antitrust law. Instead, courts need to apply the two bodies of law consistently toward their shared goals.

A stark example of the antitrust and intellectual property tension is the Eleventh Circuit's decision in *Morris Communications Corp. v. PGA Tour, Inc*.[110] In this case, a news service, Morris, was denied access to the scores collected and reported by the PGA, which had developed an elaborate collection and dissemination system that permitted real-time posting of golf scores during tournaments.[111] Morris claimed that by denying access to real-time scores, the PGA was acting anticompetitively.[112] The PGA, on the other hand, argued that it had created an expensive proprietary system to report scores and had the right to protect its investment by denying third party access to its system.[113] Even though intellectual property law did not protect the PGA's system, I have argued elsewhere that the Eleventh Circuit, by ruling for the PGA, granted the association a right to exclude that is tantamount to an intellectual property right.[114]

The court adopted the PGA's rationale for exclusion in order to prevent free riding on the association's effort in creating the scoring

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[108] *Id.*

[109] *See* Herbert Hovenkamp, *Distributive Justice and the Antitrust Laws*, 51 GEO. WASH. L. REV. 1, 10-16 (1982).

[110] Morris Commc'ns Corp. v. PGA Tour, Inc., 364 F.3d 1288 (11th Cir. 2004).

[111] Morris Commc'ns Corp. v. PGA Tour, Inc., 235 F. Supp 2d 1269, 1273-74 (M.D. Fla. 2002).

[112] *Id.* at 1275.

[113] *Id.* at 1292-93.

[114] *See* Shubha Ghosh, *When Exclusionary Conduct Meets the Exclusive Rights of Intellectual Property:* Morris v. PGA Tour *and the Limits of Free Riding as an Antitrust Business Justification*, 37 LOY. U. CHI. L.J. 723, 728-31 (2006) (analogizing to intellectual property law).

system.[115] As a matter of principle, the court's reasoning is problematic as it effectively adopts the conclusion that ownership of intellectual property should create an exemption from antitrust law. Instead, the court should have looked a bit more closely at Morris's arguments that the PGA's exclusionary conduct was affecting the market for real-time sports scores, and that the PGA did not need the benefit of exclusivity in order to recoup its investment in the creation of its score reporting system. The court ignored how the exclusion of competing reporters and the nature of the PGA's investment of labor and money to create a relatively simple means of collecting real-time sports data would affect the market for real-time sports scores.[116] As a result, the distributional conflict among creators of sports information and the consumers of such information was decided in favor of the first creator of information retrieval system on the principle that he was entitled to full appropriation of the market surplus of this new system.[117] A more careful consideration of the limits of full appropriation and the distributional issues may have allowed the court to resolve the dispute in another way, such as through the use of compulsory licensing for the information.[118] The debate over traditional knowledge provides the final example of distributive justice and the intellectual property commons.

D. Traditional Knowledge: Expanding Canons and the Global Marketplace

Much of the debate over traditional knowledge has focused on the consistency of using intellectual property, a tool of progress, to protect ancient and established knowledge.[119] Proponents of using intellectual property to protect traditional knowledge fashion the law as a tool to promote the development and dissemination of knowledge systems that would otherwise be appropriated by powerful corporate

[115] *Morris*, 364 F.3d at 1296. For further discussion of the court's approach, see Ghosh, *supra* note 114, at 741-46.

[116] *See* Shubha Ghosh, *A Rose Is a Rose Is . . . : The Thorny Case of* Morris Communications Corp. v. Professional Golf Association Tour, Inc., 1 ERASMUS L. & ECON. REV. 287, 290 (2004).

[117] *See id.* at 291 (implicitly finding strong property right in real-time scoring system).

[118] *See, e.g.*, Case C-241/91 P & C-242/91 P, Radio Telefis Eireann & Indep. Television Publ'ns Ltd. v. Comm'n of European Cmtys., 1995 E.C.R. I-00743 (limited property rights in television program listings).

[119] *See, e.g.*, Sarah Harding, *Defining Traditional Knowledge — Lessons from Cultural Property*, 11 CARDOZO J. INT'L & COMP. L. 511 (2003).

interests.[120] Critics of this use of intellectual property reason that expanding intellectual property to protect traditional knowledge would support restrictive expansions of the law, such as extending the terms for patents and copyrights and expanding the derivative work right.[121] What is interesting about the debate is how clearly distributive justice arguments percolate on both sides. Whether or not traditional knowledge is protected as intellectual property, the knowledge will be used and exploited. The question becomes by whom and how. The debate over traditional knowledge is essentially one over how intellectual property can be fashioned to govern knowledge in the global commons. As I have argued elsewhere, recognizing intellectual property rights in traditional knowledge and vesting them appropriately can assimilate groups into the global marketplace and global political debate over the rule of law and corporate power.[122] In conclusion, the arguments for and against creating intellectual property systems for traditional knowledge provide the most salient examples of conceptions of distributive justice and inform the creation of the intellectual property commons.

CONCLUSION

Hardin conceived of the activities on the commons as leading to tragedy, which he understood as the "inevitableness of destiny" and "the futility of escape."[123] Against this inevitability and futility, Hardin envisioned the social arrangements of morality to defeat destiny. There are reasons to doubt that Hardin correctly understood the threat to the real property commons.[124] The case is more compelling for rejecting Hardin's conception of the commons for intellectual

[120] *See, e.g.*, Charles R. McManis, *Intellectual Property, Genetic Resources and Traditional Knowledge Protection: Thinking Globally, Acting Locally*, 11 CARDOZO J. INT'L & COMP. L. 547 (2003) (advocating property rights in order to facilitate transactions involving traditional knowledge).

[121] *See, e.g.*, Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129 (2004) (criticizing justifications for intellectual property based on distribution of work after it has been created).

[122] *See* Shubha Ghosh, *Globalization, Patents, and Traditional Knowledge*, 17 COLUM. J. ASIAN L. 73, 79-90 (2003) (making case that protection for traditional knowledge can serve to incorporate groups into marketplace and politics).

[123] Hardin, *supra* note 1, at 1244.

[124] *See* JULIAN L. SIMON, THE ULTIMATE RESOURCE 160-74 (1981) (criticizing Malthusian views of population growth of which Hardin is one example); Ronald D. Lee, *The Second Tragedy of the Commons*, 16 POPULATION & DEV. REV. 315, 317 (Supp. 1990) (describing two tragedies, one arising from overuse of resource by existing population and second arising from population growth).

property. There is nothing inevitable or futile about the activities of the intellectual property commons. The desire to create, the need to expand the boundaries of existing commons, and the pull toward the future shows that we have choices in our social arrangements that govern the commons. More importantly, our choices need not be limited by a narrow conception of morality. Governance of the intellectual property commons mandates careful attention to the distribution of resources among creators, among creators and users, and across generations. The only tragedy is ignoring the full set of normative claims that guide the processes of creation, invention, and expansion of the commons.