Clearing the Rubbish: Locke, the Waste Proviso, and the Moral Justification of Intellectual Property

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Defenders of strong intellectual property rights or of a non-utilitarian basis for those rights often turn to Locke for support.[1] Perhaps because of a general belief that Locke is an advocate of all things proprietary, this move seldom receives careful scrutiny. That is unfortunate for two reasons. First, as I will argue, Locke does not issue a blank check in support of all property regimes, and the application of his reasoning to intellectual property would actually result in a substantially limited rights regime. Second, the attempt to understand intellectual property as an instance of Lockean property, though admittedly anachronistic, offers an opportunity to further our understanding of Locke's own thought. My major claim will thus be twofold: on the one hand, intellectual property would be an almost paradigmatic case of Lockean property; on the other hand, Locke's provisos – specifically the widely neglected spoilage proviso –

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[1] For discussion of this possibility, see, *e.g.*, Justin Hughes "The Philosophy of Intellectual Property," *Georgetown Law Journal* 77 (1988), 287-366 and David McGowan, "Copyright Nonconsequentialism," *Missouri Law Review* 69 (2004), 1-72 (motivating the move to nonconsequentialist justifications, and arguing that Locke provides the best one). For critical articles, see, *e.g.*, Seana Shiffrin. "Lockean Arguments for Private Intellectual Property," in *New Essays in the Legal and Political Theory of Property*, ed. Stephen R. Munzer (Cambridge: CUP, 2001), 138-67 (arguing that the case for Lockean IP is weak); William Fisher, "Theories of Intellectual Property," in *New Essays*, 168-99 (arguing that all of the standard theoretical justifications for IP underdetermine policy; for the Lockean, see 184-9); Wendy J. Gordon, "A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property," *Yale Law Journal* 102 (1993), 1533-1609 (focusing on the sufficiency proviso), and Benjamin G. Damstedt, "Limiting Locke: A Natural Law Justification for the Fair Use Doctrine," *Yale Law Journal* 112 (2003), 1179-1221 (arguing that the spoilage proviso mandates the need for a strong fair use right).

would sharply limit the scope of such entitlements. My secondary claim will thus be that the spoilage proviso's neglect is undeserved, and that it deserves a more central place in our understanding of Locke.

The paper proceeds as follows. In the first part, I will examine Locke's own writings on English print licensing law, which formed the backdrop against which the original copyright statute was developed. In part 2, I attempt to resurrect the spoilage proviso. Part 3 explains why intellectual property would be a paradigm case of Lockean property more broadly. On the basis of the preceding textual work, part 4 attempts a conceptual clarification of waste in Lockean terms, and part 5 applies that analysis to some contemporary intellectual property issues.

1. "Begging Drones"

Although Locke did not write on intellectual property *per se*, he did write briefly on the licensing of printed works.[2] Locke's criticisms of the Licensing Act of 1662 (which was up for renewal in 1695) follow two paths. In the first, which I will only mention, he mounts a free speech argument, articulating a version of what would now be

[2] As James Boyle points out, this is a "little-known memorandum" ("The Opposite of Property," *Law and Contemporary Problems* 66 (2003), 1-32: 4). For some discussion, see Mark Rose, "Nine-tenths of the Law: The English Copyright Debates and the Rhetoric of the Public Domain," *Law and Contemporary Problems* 66 (2003), 75-87: 78-9). The *Memorandum* was originally printed in the King *Life of John Locke*. There is somewhat less excuse for ignorance of it now, as it appears in the Cambridge edition of Locke's *Political Essays*, ed. Mark Goldie (Cambridge, CUP, 1997), 330-37, which is the edition cited here.

called prior-restraint doctrine: “I know not why a man should not have liberty to print whatever he would speak, and to be answerable for the one just as he is for the other if he transgresses the law in either.” Indeed, “some of these terms [in the Act] are so general and comprehensive” that those who enforce them will have a completely free hand; “it is impossible any book should pass but just what suits their humors.” He adds that the process “must at last end in the imprisonment of all whom you will suspect may be guilty of treason, or misdemeanor” (331). These warnings have a very precise political referent: the fallout of James II’s persecution of all those supposedly involved in the Rye House Conspiracy included the show trial and execution of Algernon Sidney on the basis of claims made in his own *Discourses*. Locke himself had fled England immediately on the discovery of the Conspiracy, and hid his own activities prior to the Glorious Revolution with sufficient care to indicate that he might also have feared for his own life.[3]

In the second, Locke launches into a lengthy complaint against the Act’s provision that “no books to be printed or imported, which any person or persons by force or [by] virtue of any letters patents have the right, privilege, authority or allowance solely to print” (331). He puts his complaint in terms of monopoly:

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[3] For details, see Richard Ashcraft, *Revolutionary Politics and Locke’s ‘Two Treatises on Government’* (Princeton, NJ: Princeton UP, 1986), 338-405. Locke’s text also clearly refers to the Inquisition against Galileo: “and who knows but that the motion of the earth may be found to be heretical, etc., as asserting antipodes once was?” (331)

> By this clause the Company of Stationers have a monopoly of all the classic authors, and scholars cannot but at excessive rates have the fair and correct editions of these books and the comments [commentaries] on them printed beyond [the] seas. For the Company of Stationers have obtained from the crown a patent to print all or at least the greatest part of the classic authors, upon pretence, as I hear, that they should be well and truly printed, whereas they are by them scandalously ill printed, both for letter, paper and correctness, and scarce one tolerable edition made by them of any one of them (332)

He adds contemptuously that "by this Act scholars are subjected to the power of these dull wretches who do not so much as understand Latin" (333).

Locke's solution is to put strict term limits on the granting of licenses, such that "nobody should have any peculiar right in any book which has been in print fifty years … for by such titles as these which lie dormant and hinder others many good books come quite to be lost" (333). He makes several arguments in support of this position. First, there can be no "reason in nature" why the liberty of printing ought to be restricted. Second, liberty of printing allows editions to appear which are "cheaper and the better." Third, there advantages for trade policy: Holland's more relaxed laws have "brought in great sums to the trade of Holland." Finally, the law's restriction on the printing of the classics is unrelated to its ostensible purpose, which is to prevent the appearance of new seditious works.

The relevance of this line of thought to contemporary U.S. intellectual property law is straightforward and obvious: when the Congress passed and the Supreme Court upheld the Copyright Term Extension Act, retroactively extending the copyright term by twenty years, to life of the author plus seventy years, it is hard to imagine that Locke would have approved. In particular, it is hard to imagine how the retroactive extension of copyright is rationally related to the act's supposed purpose, which is to provide incentives for the generation of *new* works. Locke's other complaints also seem to port to the present situation without extensive reworking: Locke complains of the effort to enforce the law through third parties by penalizing landlords who knowingly rent to tenants who operate a printing press (334; compare discussions of the efforts to hold ISP's liable for infringement they know [or should know] occurs on their networks) and of the "unlimited power to search all houses and to seize upon all books which they shall but think fit to suspect" (335; to avoid their own liability, ISP's are currently required to order the removal of material which is alleged to infringe, without any sort of due process). Such constant threat of search "under pretence of unlicensed books," says Locke, is a "mark of slavery."

Beyond the *prima facie* assertion of Locke's relevance to contemporary IP debates, of particular interest is the language Locke uses in establishing his argument. As his reference to the monolingual "dull wretches" suggests, the armature around which this argument turns is the value of productive labor. He summarizes that "by this Act England loses in general, scholars in particular are ground [down] and nobody gets [anything] but a lazy, ignorant Company of Stationers, to say no worse of them" (335). The pragmatic offense of the Act is the damage it does to England's commercial interests, particularly *vis a vis* arch rival Holland. But the moral offense of the act is that it rewards those who do not work with *de facto* property rights. The situation is thus analogous to that of inheritance in the *Treatises*, and Stationers' Rights are suspect and to be circumscribed for the same reasons that inheritance rights are: the benefactors have done nothing to earn them. Inheritance rights are based on the inability of children to care for themselves; as Locke puts it, people are "by a like Obligation bound to preserve what they have begotten, as to preserve themselves" (I, 88), and children are "born weak, and unable to provide for themselves" (I, 89). Inheritance is thus not, *contra* Filmer, a divine allotment to the first-born, but a part of self-preservation, and a property claim subject not only to the normal limitations on property, but also to specific limits on inheritance. Not only that, but insofar as the Licensing Act awards property to those who do not earn it, it is charity. However, the Stationers are able to work, unlike children or the truly needy, and so it is unjustified charity at that. Locke is quite clear that someone in "extream want" has the right to subsist on charity (I, 42), but he is equally clear that charity is only for those who actually need it. Hence, those "begging drones, who live unnecessarily upon other people's labour" should be kept at hard labor for a period of several years, as his infamous "Essay on the Poor Law" puts it.[4] None of this establishes what Lockean theory would say when applied to IP, but it does establish an interpretive background against which this application can be understood. In particular, I think it establishes an interpretive presumption against Lockean support for the sempiternal monopoly rights over products whose actual creators may be long dead.

[4] "An Essay on the Poor Law," *Political Essays*, 184-6.

2. Waste Not

The spoilage proviso is out of favor with Locke's commentators. Nonetheless, as I shall argue here, it serves a crucial role in Locke's overall understanding both of natural law generally and of property more specifically. In this section, therefore, I will offer a general reading of the proviso that preserves its importance against the two most common critiques of it: that it is otiose in general, and that it is rendered otiose by the introduction of money. As part of the general reading strategy, I begin with some comments on how to relate the injunction to work to the original commons as Locke interprets it.

The proviso occurs early in the chapter on property. In answering the objection that if gathering confers a property right on that which is gathered, "one may engross as much as he will," Locke claims that:

> The same law of nature that does by this means give us property does also bound that property, too. 'God has given us all things richly' (I Tim. 6.17), is the voice of reason confirmed by inspiration. But how far has he given it to us? To enjoy. As much as any one can make use of to any advantage of life before it spoils, so much may he by his labor fix a property in; whatever is beyond this is more than his share and belongs to others. Nothing was made by God for man to spoil or destroy (II, 31).

The first thing to notice is that Locke thinks the spoilage proviso is a corollary of God's initial grant of the world in common. Thus, the initial commons is "given to men for the support and comfort of their being;" in addition, God has given people "reason to make use of it to the best advantage of life and convenience" (II, 26). As many commentators have noted, this seems to entail a right of subsistence, and even an affirmative duty to provide such subsistence for those who cannot provide it for themselves. However, Locke's claim is stronger than this: it is not just our obligation to subsist, but to thrive where possible: the earth is to be put to "best advantage," (*ibid*), since people were given the world "for their benefit and the greatest conveniences of life they were capable to draw from it" (II, 34). In short, we are to strive for the optimal productive use of the resources given us.

Property is then to be justified as a legitimate means to achieve the optimal use of resources. In particular, we might view the issue in contemporary terms as avoiding two opposing tragedies. One is a tragedy of the commons, where excessive use rights lead to resource depletion. The tragedy of the commons is thus a tragedy of non-productive overuse. Equally important from Locke's point of view is the mirroring tragedy of the anticommons, when granting too many individuals veto right over a resource results in holdouts and underdevelopment of the resource. Indeed, Locke's entire discussion revolves precisely around such a veto right: if explicit consent were necessary to use a resource in the commons, *per* Filmer, then "if such a consent as that was necessary, Man had starved, notwithstanding the plenty God had given him" (II, 28).[5]

[5] It will be objected that Locke is grounding property in the extension of one's person, as when he says that "every man has a property in his own person" (II, 27). I will not argue for all the details of my interpretation here, but note that the grounding of a labor-based property in one's supposed ownership of personhood (a) presupposes what it is to prove, namely, why somebody could be said to own their person. This is probably because (b) it conflates body and person. For Locke, we most certainly do not own our bodies (hence the bans on slavery and suicide). As the *Essay* makes clear, our persons are the result of our

In particular, and in a way which Locke may or may not have spelled out coherently, proprietization seems to allow the benefits of labor to be fully realized, especially as that labor is applied to the earth itself. Such is the "chief matter of property … not the fruits of the earth and the beasts that subsist on it, but the earth itself, as that which takes in and carries with it all the rest" (II, 32). Having established that property in objects on the earth is the consequence of the admixture of labor with those objects, Locke argues that property in the earth itself is also granted by labor. Hence, "as much land as a man tills, plants, improves, cultivates, and can use the product of, so much is his property." His justification for this claim amalgamates several lines of reasoning:

> He by his labor does, as it were, enclose it from the common …. God, when he gave the world in common to all mankind, commanded man also to labor, and the penury of his condition required it of him. God and his reason commanded him to subdue the earth, i.e., improve it for the benefit of life, and therein lay out something upon it that was his own, his labor (II, 32).

Whether a property regime in land does in fact make better use of the resource is taken by Locke to be an empirical question with an overwhelmingly affirmative answer, as his repeated and increasingly extravagant comparisons to North American land use suggest. Indeed, this is a central feature of Locke's narrative: against those who claim that property rights regimes damage the commons, Locke claims that proprietized labor in

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labor and narrative self-construction . Thus, personhood presupposes the labor account, not the other way around.

fact *gives back* to the commons, and results in an increase to it; hence, "he who appropriates land to himself by his labour, does not lessen but increase the common stock of mankind" (II, 37). In contemporary terms, property regimes have positive externalities, and Locke's usage of the sufficiency and spoilage provisos are designed to ensure that those externalities are realized. Hence, not everyone will have land, but they will be left with "enough and as good."[6]

To interpret Locke in this way is not to resolve all of the difficulties in his account. The interpretation should, however, allow two basic observations. First, as Locke's comments about lazy stationers also suggest, the injunction to labor is of fundamental importance to Locke, logically prior to virtually all other aspects of his account except (perhaps: see below) the initial command of self-preservation.[7] Second, if our moral obligation is to make optimal use of the earth, then some sort of property regime might be a legitimate way to achieve that result. It is also important to note what

[6] The standard economics narrative about property is of course that property regimes avoid tragedies of the commons by internalizing negative externalities, such as overuse. I take it the point here is somewhat different, that there are independent benefits to the commons which are attributable to the property regime (at least, if done right). On this, see, *e.g.*, Carol M. Rose, "The Comedy of the Commons: Custom, Commerce, and Inherently Public Property," rpt. in *Property and Persuasion: Essays on the History, Theory and Rhetoric of Ownership* (Boulder: Westview, 1994), 105-162: 141 (noting the importance of investment in the public space for real-space property regimes); and Mark A. Lemley, "Property, Intellectual Property and Free Riding," *Texas Law Review* 83 (2005), 1031-nnn (arguing that, in the case of intellectual property, all the externalities are positive). Locke's provisos seem designed to avoid the sorts of distributive problems analyzed in Anupam Chander and Madhavi Sunder, "The Romance of the Public Domain," *California Law Review* 92 (2004), 1331-1373.

[7] As Ashcraft notes, it is also tied directly to the prohibition against waste; he assembles numerous further textual examples as evidence of Locke's "positive endorsement of laboring activity, productivity and commercial expansion, and a corresponding critique of idleness and waste, however these attributes are expressed in any particular social context" (266; the examples follow).

does not follow from this result. First, it does not follow that a property regime is necessary to use our resources well. Even if we grant Locke's claims about land use, it still does not follow without argument that the right regime for land use is the right regime in other contexts.[8] Second, it does not follow that just any property regime would be justified. If a property regime, either *de jure* or *de facto*, failed to make optimal use of our resources, it would be invalidated by natural law. Also, apparently, if a property regime improperly rewarded those who did not labor, then it would also be invalid by natural law.

The sufficiency and spoilage provisos serve as two of Locke's checks on the optimality of property regimes. Our obligation, says Locke, is to increase the commons, in order that we may not just live, but live well. As the repeated emphasis on labor suggests, this is a moral duty. Sufficiency names a pre-production condition: I have an obligation not to take out too much, such that my use would impede the use of others, either now or in the future. Spoilage names a post-production condition: one has an

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[8] In this sense, I think it is false to say that Locke's concern is to "justify property rights." His point is to make sense of our various natural law obligations of preservation and improvement of the species; property rights are one way to do so. However, it seems to me that property rights are clearly a contingent feature of the system in that he does not prove, *a priori*, that property rights are strictly *entailed* by our command to preserve ourselves. If, for example, it were possible to satisfy our obligations without property, then we would be free to do so. Similarly, if Locke's claims about Native American land use turn out to be wildly inaccurate (as they most certainly are), then it would be appropriate to reconsider his account of property. If non-proprietary regimes were to do a better job of avoiding a tragedy of the commons, then Locke's view would probably also require that such a regime be adopted. Locke's view also does not entail that the same management schemes would be appropriate to manage all resources. Locke would probably not endorse any of these results, but his examples of Native American land use are clearly empirical in nature and would thus be defeasible on empirical grounds.

obligation to return excess products of labor to the common, such that one *actually* increases the common stock.[9] The two conditions are equally necessary. Goods which are illegitimately enclosed and which fail to leave "enough and as good" are lost to the common stock, but, as Locke also says, goods which spoil are lost to the common stock as well (II, 31).

There are two standard lines of objection to affirming the importance of the spoilage proviso. The first, suggested by Nozick, is that it is conceptually superfluous, subsumed by the sufficiency proviso: no one has any right to complain about waste if he has "enough and as good" on his own. As the above should indicate, there are several problems with this reading. First, it does violence to the text: Locke is clearly offended by waste. Second, it violates our moral intuitions: we are also offended by wasted resources, even if we have enough of our own. Third, given that we have a moral obligation to the common stock of mankind, then some sort of restriction on hoarding and waste is clearly a corollary of that obligation.[10] Any product of labor which is not utilized is simply a failure to mankind in general. Nozick errs here by reading far too much individualism into Locke. It might be true that *I* have no complaint about my

[9] Thus Damstedt's repeated differentiation between a pre- and post-production commons may be overdrawn. For further discussion, see below.

[10] Hughes suggests that one could distinguish waste as (a) present use to some one, (b) future potential use to the owner. Nozick's invocation of sufficiency would address (a) but not (b). See "Philosophy of Intellectual Property," 327-8.

neighbors rotting apples if I have enough to eat, but it does not thereby follow that no complaint is possible.

A second usual objection to the importance of the spoilage limitation is that the introduction of money makes it irrelevant. Bartering away perishable goods is one way to prevent their waste; As Locke says, if someone “bartered away plums that would have rotten in a week for nuts that would last good for his eating a whole year, he did no injury; he wasted not the common stock” (II, 46). The logical consequence of this is the introduction of money, “some lasting thing that men might keep without spoiling, and that by mutual consent men would take in exchange for the truly useful but perishable supports of life.” Money then allows the opportunity to “continue and enlarge” possessions (II, 48). Locke even suggests that the introduction of money is a necessary psychological incentive to the proper use of our resources, since land enclosure is necessary for productive us, and without money, “men will not be apt” to enlarge their possessions, no matter how plentiful the land is. In its extreme version, this interpretation entails Macpherson’s thesis: that what might at first glance appear to be an limited right of appropriation is suddenly transformed into “unlimited natural right of appropriation” such that “it is neither unjust nor foolish to accumulate any amount of land in order to make it produce a surplus which can be converted to money and used as capital.”[11]

[11] *Possessive*, 203, 208.

There are nonetheless a number of reasons to doubt this interpretation as well. First, money eliminates concerns about spoilage only if someone actually exchanges their perishable goods for it. If I hoard and let apples rot because I refuse to sell them to someone on the grounds that they are offering insufficient money in exchange, I have presumably still violated the proviso. In other words, money at most introduces a possible way to circumvent the proviso, but not the guarantee that someone will actually avail themselves of the circumvention procedure. Second, and more generally, money would work only for goods that are fully fungible with money. To assume that money is all there is to say about spoilage is to assume the possibility of complete commodification. Initial evidence that this reading is wrong is in the wording of the sufficiency proviso: one is supposed to leave "enough and as good," which clearly indicates that mere fungible quantity ("enough") is not sufficient to satisfy the proviso. It has a qualitative element which is not reducible to such calculations. In any case, Locke clearly does not subscribe to a view of universal commodification, as there are any number of things which might be alienable in theory that Locke will nonetheless declare to be inalienable as a matter of natural law: one is not entitled to destroy oneself, on the grounds that one's body is actually God's property (II, 6); one is not allowed to sell oneself into slavery (II, 22);[12] one cannot assume to have consented to the arbitrary

[12] In this, there was a clear contemporary target: Grotius supposes that extreme physical situations might

exercise of legislative power (II, 135); and one cannot alienate to the sovereign one's right to self-defense (II, 149). These various clauses suggest that Locke thinks that personhood is inalienable, as is also supported by his declaration that "every man has property in his own person" (II, 26), which he takes not to require further substantiation. There are many aspects of personhood that one might take to be non-fungible; insofar as any of them could be wasted, the presence or absence of money would not change the offense to natural law of wasting them. Indeed, the very attempt to commodify them might itself violate natural law by reducing their value for inadequate compensation. In the case of intellectual property, there are any number of non-fungible intangible goods, such as the right to free expression, or perhaps life itself, which one should seriously hesitate to call fungible.[13]

The spoilage limitation also has a metaphysical justification, as is spelled out more clearly in Locke's early *Essays on the Laws of Nature*. There, again, labor plays a key role. Awareness of the law of nature itself is reserved for those who work: "it is with great labor that those resources which lie hidden in darkness are to be brought to the light of day. They do not present themselves to idle and listless people" (95). Since we are bound by the law of nature to find it, and since a necessary condition for the discovery of

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permissibly warrant bartering one's freedom away: "that is complete slavery which owes lifelong service in return for nourishment and other necessaries of life; and if the condition is thus accepted within natural limits it contains no element of undue severity. For the lasting obligation to labour is repaid with a lasting certainty of support, which often those do not have who work for hire by the day" (II.5.27)

[13] For more on this point, see Gordon, 1570.

that law is labor, it follows that we are bound by the law of nature not just to labor but to intellectual labor. I will return to this requirement in the case of intellectual property; for the moment, I want to note the way in which Locke also assigns an independent basis for the requirement of productive work into the nomological structure of the universe itself:

> It does not seem that man alone is independent of laws while everything else is bound. On the contrary, a manner of acting is prescribed to him that is suitable to his nature; for it does not seem to fit in with the wisdom of the Creator to form an animal that is most perfect and ever active, and to endow it abundantly above all others with mind, intellect, reason, and all the requisites for working, and not assign to it any work, or again to make man alone susceptible of law precisely in order that he may submit to none" (87)

In other words, if humankind were not meant to work, God would have wasted his effort in endowing humanity with its numerous faculties – in particular, intellect. In this sense, the spoilage proviso is justified not just by the no harm principle and the command to make the best available use of available resources, but also by fundamental principles of the intelligibility of the universe (that God does nothing in vain) and of divine wisdom (that God would not want to waste his effort). The following conclusion suggests itself: if you do not work, God has wasted His effort in making you.[14] If you hoard your work, you do not fully use your faculties as they were intended. In other words, human

[14] Thus one result of the first *Treatise* is that you don't make yourself, and your father doesn't make you, either, which implies that God did as the only agent capable of doing so.

spoilage creates divine spoilage. But it is an affront to divine wisdom to waste God's property. Spoilage is in this sense an affront to God in the same way that suicide is.[15]

3. Paradigm Case

In the *Second Treatise* discussion of property, land use is the persistent example around which Locke constructs his argument. Nonetheless, I want to argue here that this is a contingent feature of the text, and not a necessary component of its conceptual structure. In particular, if one views chapter 5 of the *Second Treatise* in the context of our natural law obligations to species preservation and human flourishing, and if one views the overall thrust of Locke's model of production as a "maker's knowledge," then the focus on land in chapter 5 emerges as an artifact of the particular concerns that motivated Locke's writing at the time: on the one hand, the general Whig need to defend property claims against usurpation by the monarch, and, on the other hand, revisions to the Carolina Constitution.[16] The conceptual structure of Locke's argument, on the other hand, indicates that intellectual property is the paradigm case of property.

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[15] One is entitled to wonder at this point: could this Lockean justification or not work for an atheist? Since the argument here is a critique of an appropriation of Locke, one need not reach this issue here. I do, however, return to it briefly in my conclusion.

[16] For the former, see Ashcraft, *passim* ; for the latter see David Armitage, "John Locke, Carolina, and the *Two Treatises on Government*," *Political Theory* 32 (2004), 602-27, showing that Locke was deeply involved in revisions to the Carolina Constitution while he was writing chapter 5 of the *Treatise*. This is not to say what Locke's views on Native American land use were; it is simply to suggest a reason why they were in the foreground of his thinking.

To see this point, I want to begin elliptically, with the earlier *Essays on the Law of Nature*, and Locke's discussion there of the teleological nature of the world. Locke's discussion here is conventional. In affirmatively answering the question of whether we can by reason obtain knowledge of the natural law through sense experience, he establishes as presupposed in any knowledge of law (a) that law requires a lawmaker, and (b) that the lawmaker must want its subjects to do something. The first part Locke proves with the argument from design, arguing from sense experience in the world that "it is surely undisputed that this could not have come together so casually and by chance into so regular and in every respect so perfect and ingeniously prepared structure" (103). He then lifts from Descartes a series of reasons why people cannot self-create in order to infer the existence of a divine creator. To prove the second proposition, he begins by noting that the divine creation entails a teleological structure for the universe, as it is contrary to wisdom to work "without a fixed aim" (105). We therefore know that "God wills that we do something" (105). We can infer the nature of what we are to do from an examination of our faculties:

> For since man is neither made without design nor endowed to no purpose with these faculties which both can and must be employed, his function appears to be that which nature has prepared him to perform …. He feels himself not only to be impelled by life's experience and pressing needs to procure and preserve a life in society with other men, but also to be urged to enter into society by a certain propensity of nature, and to be prepared for the maintenance of society by the gift of speech and through the intercourse of language, in fact as much as he is obliged to preserve himself (105-6).

Simply, our "agile, capable mind," insofar as it is capable of thought, is there to produce thought; to suppose otherwise would be to suppose that it was created in vain. These concerns are echoed in the *Second Treatise,* where Locke makes similar claims for intellect and language: “God, having made man such a creature that in his own judgment it was not good for him to be alone put him under strong obligations of necessity, convenience, and inclination to drive him into society as well as fitted him with understanding and language to continue and enjoy it” (II, 77). Our natural faculties, then, are there with a view toward living well, as part of our larger mandate of self-preservation. In the chapter on property, Locke puts it this way: God gave the earth “to the use of the industrious and rational – and labor was to be his title to it – not to the fancy or covetousness of the quarrelsome and contentious” (II, 34).

Examination of the human purpose thus entails examination of the products of the human mind. It is the intellectual component of this labor which marks us as human and which marks the labor as the sort of activity that adds value. It is not just that humans have intellect as distinct from bees; it is that the value we add to the world through labor requires that it be governed by intellect.[17] The *Second Treatise* is perhaps not as helpful as one would like on a central question here, *viz.*, the definition of “labor.” Two points of

[17] For recent work defending Locke’s claims in II, 37 and II, 43 about labor as the source of value in land, see, *e.g.*, Daniel Russell, “Locke on Land and Labor,” *Philosophical Studies* 117 (2004), 303-25; and Sagoff, Mark. “Locke was Right: Nature Has Little Economic Value,” *Philosophy and Public Policy Quarterly* 25.3 (2005), 2-11; and, in the IP context, Gordon, “Property Right in Self-Expression,” or the Supreme Court’s unanimous affirmation in *Feist v. Rural*, 499 US 340 (1991) of the originality over “sweat of the brow” condition for copyright. Gordon writes: “aimless effort is not labor. Appropriative labor involves bodies altering what was in the common in a way that makes it usable and thus more valuable to humanity. It may also involve a kind of psychological identification, an ‘infusion of personality.’ Most important from the perspective of the laborer’s claim, however, is the laborer’s purposiveness” (1545).

clarification may be introduced, however. First, several textual examples support the thought that idle activity alone is not enough, and Locke refuses to grant property rights to exertion that does not produce something new or useful. Beggars, for example, exert themselves, but Locke thinks that they should be rounded up and forced into socially productive service if they are capable of it. Similarly, Locke's complaints against the stationers – that they are "idle, begging drones" cannot mean that they do nothing. After all, they reprint books and market them. However, that activity is apparently not "labor." More contentiously, perhaps, Locke does not presuppose that Native Americans do not exert themselves; he rather supposes that their exertions are wasteful because misdirected: where they fail is in "improving it [land] by labor" (II, 41). Second, Locke's uses of the term in the *Essay* underscore its purposive, productive aspect, even with regard to intellect. Hence, human knowledge might be increased if only people would "employ all that industry and labour of thought, in improving the means of discovering truth" that had been expended on production of falsehood (4.3.6); Locke's own role is that of an "under-labourer in clearing the ground a little" (Epis. Reader). Indeed, reasoning itself is a labor: "all reasoning is search, and casting about, and requires pains and application" (1.1.10).

The application of intellect, then, is what turns idle activity into labor. Consideration of the metaphysical context in which Locke explains labor and possession makes the point even clearer.[18] As the *Second Treatise* claims, it is by making something that someone has possession over it (II, 6). However, humans are able to possess in the first place because they have something intellectually in common with God. As Locke puts it in the *First Treatise*, citing *Genesis* I.26:

> God makes him "in his own image, after his own likeness; makes him an intellectual creature, and so capable of dominion:" for wherein soever else the image of God consisted, the intellectual nature was certainly a part of it, and belonged to the whole species, and enabled them to have dominion over the inferior creatures (I, 30).

In other words, it is by analogy to God that we are capable of dominion in the first place. Of course, unlike in the case of God, human creation is not *ex nihilo*: we make things out of pre-existing materials. This is true even for inventions, as we rely upon pre-existing ideas. Hence Locke defines an invention as the "voluntary putting together of several simple ideas in our own minds." His examples are to do with printing: "he that first invented printing, or etching, had an idea of it in his mind before it ever existed" (*Essay* 2.22.9). But, he adds, "all our complex ideas are ultimately resolvable into simple ideas, of which they are compounded" (*ibid.*); these simple ideas ultimately trace back to sensation and reflection on sensation. In short: Locke's empiricism means that even

[18] In what follows, I am heavily indebted to Tully, *Discourse on Property*.

inventive production, which is the mark of labor and the aspect of our labor which allows possession, depends on an intellectual commons of previous ideas.

Only God's production of the world is thus a "creation" in the sense defined in the *Essay*, *viz*. "when a thing is wholly made new, so that no part thereof did ever exist before" (2.26.2). The products of human labor are by necessity therefore either the results of "making" or "alteration." Making, like its natural counterpart, "generation," implies the creation of a new subject/substance:

> When a thing is made up of particles which did all of them before exist, but that very thing so constituted of pre-existing particles, which considered all together, make up such a collection of simple ideas, had not any existence before as this man, this egg, rose, or cherry, &c. (*ibid.*)

It is thus to be distinguished from "alteration," which is when an idea is produced that was not in the same subject before, but which does not produce a new substance or subject.

The products of labor can thus be evaluated on a continuum, the poles of which are a creation *ex nihilo* and the mere alteration of an existing object. The archetype of this continuum is clearly God's creation of the world. The more closely human artifactual production approximates the divine production of the world, the more divine is that human activity in the sense of its being an *imitatio Dei* and fulfillment of God's grant of dominion over the world and its objects. Insofar as intellection is the common denominator which allows the varying kinds of production to be considered under the same ratio, the degree of intellection required in a given act of laboring production can serve as a metric for evaluating it. This allows one to make some sense of Locke's examples in the *Second Treatise*, which clearly cannot all be at the same level. At the center of the discussion are examples involving land enclosure, in which one's application of the techniques of husbandry and agriculture clearly allow the production of new objects in the world (demonstration of this is by the absence of similar products on uncultivated land). Moving down the continuum in one direction, various acts which seem more like alteration than making also count as property, from the gathering of "fruit or venison which nourishes the wild Indian, who knows no enclosure" (II, 26) to moving ore from its location in the earth (II, 28), to putting water into a pitcher (II, 29), to gathering acorns (II, 31), to the act of choosing and starting to chase a hare (II, 30). Nozick's famous example of dumping my tomato juice into the ocean shows the limit by transgressing it: an almost pure alteration, it fails to meet even a *de minimis* level of originality.[19]

[19] A. John Simmons objects to Tully's workmanship account on the grounds, *inter alia*, that it cannot account for Locke's examples in II, 26-31, which seem to involve relocating things that God already made. I think that recognizing a continuum from creation to alteration goes a long way toward meeting this objection, as it allows property to be a more flexible concept, where the analogy to God's creation of the world admits of degrees. This also resolves Simmons' objection that the workmanship account cannot explain why idle, non-productive activity might make something but not create property: there is an intellective, *scienter* component. I have to *intend* to make something. Finally, this squares the account with Locke's theology, since it emphasizes the difference between human and divine making. That said, the interpretation presented here does not by itself explain why my turning your coffee table into a chair does not make it mine; Simmons claims that this requires his "sphere of influence" interpretation. I would argue that the status of my person as my property accounts for this. See A. John Simmons, "Maker's Rights," *Journal of Ethics* 2 (1998), 197-218.

Moving up the continuum in the other direction, one encounters the one item that Locke presents as property with no further justification: my “person” (II, 27). A “person” is, in Locke’s famous definition:

> A thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places; which it does only by that consciousness which is inseparable from thinking, and it seems to me essential to it …. For since consciousness always accompanies thinking, and it is that that makes everyone to be what he calls ‘self,’ … in this alone consists personal identity … and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person (*Essay* 2.27.9).

The narrative construction of my own identity by the purely intellective activity of uniting the different experiences I have had into one, persistent “person” would seem to come as close as humanly possible to the divine act of pure creation. After all, it is true that we ingest and incorporate other materials into our bodies – but those materials are irrelevant to our personhood without conscious reflection on them. in this sense, personhood is the production of something which is not only essentially non-corporeal, it is *ex nihilo* in the sense that gap between mind and body interrupts any sense of explanatory continuity between the extant person and the corporeal things which go into it.

In sum, Locke talks a lot about land use, but the better fit is with the quintessential intellectual creation of personhood. From here, it is a short distance to a full integration of intellectual labor into the Lockean account. In a straightforward way, intellectual labor is presupposed in all other forms of labor. Not only that, intellectual labor functions on the space of a commons of pre-existing ideas and products. When I intellectually labor, I draw upon the ideas and intellectual goods of others. It is true that most of these are "post-production" goods in the sense that intellectual labor does not typically occur in a vast expanse of never-before developed ideas. As Wendy Gordon puts it:

> Admittedly, for the intangible reality of intellectual property, the common must be defined differently. The central criteria are the same, however, equality and need. Everyone has an equal right to use the common, and everyone has needs to use the common for sustenance. The most obvious component of the intangible common is equivalent to what our law now identifies as the 'public domain': those intellectual creations already in existence but not privately owned (1559).[20]

One might add that even Locke's own discussion suggests that "post-production" goods can be part of the common in tangible goods, as well: otherwise, Locke's claims about spoilage would be nonsensical. Of the products of my labor, "whatever is beyond" my ability to consume before it spoils "belongs to others" (II, 31). This is why Locke can claim that someone who "appropriates land to himself by his labor does not lessen but increase the common stock of mankind" (II, 37). The only question remaining is whether the products of my intellectual labor can themselves be intangible. However, Locke's discussion of personhood clearly indicates that they can.

4. The Concept of Waste

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[20] This passage also illustrates that Damstedt's repeated claim that Gordon does not notice any difference between the commons and public domain (*e.g.*, at 1192) is without foundation.

The abstract specification of waste on Lockean terms must begin by acknowledging a primary difference between intellectual and real property, namely, that one does not actually consume a piece of intellectual property by using it. It is this sense in which intellectual property can be said not to be rivalrous, and it is also this sense in which one cannot directly apply Locke's own terminology about spoilage to an IP context. Let us look, once again, at Locke's formulation. A property right is a claim right:

> To enjoy. As much as any one can make use of to any advantage of life before it spoils, so much may he by his labor fix a property in; whatever is beyond this is more than his share and belongs to others (II, 31).

Since Locke's example clearly does not fit with ideas, how might one conceptualize the underlying argument so that it encompasses both ideas and real property? In other words, how might one specify the argument such that it comports with the apparent conceptual weight that Locke assigns to ideas and intellectual labor, such that real property appears as a species of property but not as its essential form?

The key, I think, to the passage above is Locke's implicit thought that there will always be at least conceivable demand for wasted property. Thus, the inhabitants of Spain "think themselves beholden to him who by his industry on neglected and consequently waste land has increased the stock of corn which they wanted" (II, 36). At least two points of clarification are necessary here, as evidenced by Locke's equivocal use of "waste," here referring not to spoilage but to undeveloped resources.[21] First, property, *i.e.*, the products of labor, could always in theory improve the life of someone: this is why labor is said to improve the common stock. Indeed, this seems to be one of the limits implicit in the Lockean account of property: if a product could not conceivably improve the condition or enjoyment of anyone's life, it would be difficult to grant a natural property right in it, since the natural property right is closely bound by language about the divine command to labor *in order to* improve the human condition. A given product which was not in any way useful, then, might very well not qualify as property under a Lockean regime. Second, that Locke takes any given property to actually be able to improve the life of someone is implicit in the formula of the spoilage proviso itself. If property could not improve the life of someone through being used, then it would be impossible not to violate the proviso, and spoilage would be inevitable (think of a situation where there is simply more food at a banquet than everyone can collectively eat).

Waste therefore happens when the product of labor that could improve somebody's life is allowed to expire – irrevocably lost its value – before it actually does so. This is a unique post-production problem: it is true that there is no cure for cancer in the commons, but for that reason, it is impossible to complain about wasting it. The

[21] This formulation is repeated at II, 42 and II, 45.

relevant command in that case is to apply one's labor toward discovering such a cure. Similarly, demand and supply are tied: if all of the apples have been used to feed the hungry, then the correct complaint of the remaining hungry is not about the waste of apples. From this one can also see that the command to labor would itself be meaningless if there were no command not to waste the products of labor: labor that could freely be wasted would be purposeless. As an initial specification of spoilage in the case of rivalrous goods, then, one might think of it as a non-pareto-optimal allocation of goods. There is demand for a product, and that product exists, but it doesn't go to satisfy that demand. It would thus be possible to improve everyone's situation with a suitable reallocation. Two moral imperatives can be derived from this situation. The first is a duty of charity (I, 42), which specifies the ways in which we are obligated to distribute goods to those who need them and who cannot provide them for themselves. This is a question of what one might call practical ethics, and deals with the distribution of goods that do not, *in fact*, satisfy demand. The second is more abstract, and is logically prior to the first: one has an obligation not to allow products of labor to spoil, since then they would *in principle* be unable to satisfy demand.[22]

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[22] A similar distinction in types of spoilage is mapped (in a non-Lockean context) by Edward J. McCaffery, "Must We Have the Right to Waste?" in *New Essays in the Legal and Political Theory of Property,* ed. Stephen R. Munzer (Cambridge: CUP, 2001), 76-105. McCaffery distinguishes between "dissipatory" waste, where the value is destroyed (my second type), and "non-urgent consumption" waste, where value is consumed in a non-socially-optimal way (my first). McCaffery suggests that modern property regimes, which generally allow waste as a part of a plenary grant of rights to dispose of one's property (thus, the

The model, here applied to rivalrous goods, can be extended to apply to non-rivalrous, intellectual goods. Justin Hughes usefully clarifies two ways of thinking about waste: food spoilage involves loss of both (a) "present potential use of those who do not own the food" and (b) "future potential use of the owner" (327). He then points out that the loss in value "is seen only against a social backdrop" such that outdated ideas may become fashionable again. Compared to the absolute loss presented by rotting apples, then, "the value lost by hoarding an idea until it becomes obsolete … is speculative and may be reversible" (328). The temporal sense of Hughes' distinction and in the term "obsolescence" suggests a different interpretation of waste, one that goes some ways toward answering his. If we could say with certainty that an obsolete idea would never recover some portion of its value, then presumably it could still be wasted, even though it continues to exist. Such a split between the object's potential value and its existence is enabled by the non-rivalrous nature of intellectual property. In other words, the conceptual issue is not the loss of the object, but the loss of all possible *use* of the object. If the loss of the use of the object is the problem, that further implies that the loss of the

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right to waste comes paired with an inheritance right), remove incentives to dissipatory waste (since my interest in preserving the property is perpetual insofar as it transfers to my heirs) but thereby increases incentives to nonurgent consumption (since I am not holding the property in trust for anyone, my consumption need not take the needs of others into account). A thorough application of this argument to Locke would require more space than I can devote here, but it is worth noting, that if McCaffery is right about the tradeoffs, and if money generally *de facto* addresses the spoilage proviso, we can see how the introduction of money might, as McPherson suggests, incentivize unlimited capitalist appropriation.

potential user should also be a relevant factor in determining spoilage.[23] If I hoard apples until someone who needs them dies of hunger, then it seems reasonable to say that I have wasted them, just as letting them rot wastes them. In both cases, I have "robbed others." The only difference between the two situations is the specificity of the described demand: in the case where I let them rot, it is assumed demand, whereas if I let the person die of hunger, the demand is completely specified. But the specificity of the demand is an empirical matter; the validity of the complaint about letting apples rot presumably cannot be negated from the other end with the discovery that those who live near the orchard are allergic to apples and therefore not themselves affected by the spoilage.

Introducing both supply and demand into the equation allows one to see the relevance of the proviso in an intellectual property context. One set of concerns, as Hughes suggests, is in the speculative nature of the value of IP. Another is that problems with IP have to do with supply. On the one hand, IP is non-rivalrous, so there are no obvious *per se* negative externalities to its consumption. On the other hand, for some IP at least, increasing use of digital media is driving the marginal costs of reproduction of the object bearing the property down to near zero. Together, these mean that the

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[23] I will largely confine my discussion here to what Derek Parfit calls "same person" situations (*Reasons and Persons* (Oxford: Clarendon Press, 1984), 351-80). A full discussion of waste and lost value would need to consider scenarios where the spoilage could be said to affect future generations . The Lockean situation is of course somewhat different from the various scenarios Parfit discusses, since Locke's point is to impose normative constraints on individual calculations of utility. The question of future generations in a Lockean context has been usefully addressed in Clark Wolfe, "Contemporary Property Rights, Lockean Provisos, and the Interests of Future Generations," *Ethics* 105 (1995), 791-818.

"supply" of such a product is in principle infinite, and so whatever difficulty a property regime introduces will have to do with the match of that product to a temporally sensitive need. In other words, unmet demand *simpliciter* is the issue, since there is no possibility of supply shortages.[24]

Conceptualizing the issue in this way allows one to further specify the nature of the problem. It is not technical: if I want a copy of a great idea, but I do not have the intellectual capacity to understand it, or to make use of it, then I do not have a complaint about waste. Similarly, if I possess the cure for cancer but lack the raw materials to produce it, then it is only in a colloquial sense that the idea is "going to waste." The problem with waste is more specific, and is implicit, again, in Locke's examples: it is not just that the product does not get used, but that property claims get in the way of its use. Hence, in Locke's original paragraph, the remedy against hoarding is quite narrow: it is to negate the property claim over the object, allowing it to be used by others without violation of the law of nature. Locke's discussion around the introduction of money also attests to this thought, as the language is again in terms of property claims: one who allowed product to spoil "took more than his share and robbed others," and alienation of

[24] Rather, one should say: supply shortages are artificially induced by the law or other means. This also points to the extent to which we are dealing with a moral consideration, and not an economic one, since in a situation in which there is no scarcity, normal economic rules do not apply. I pursue this point in a very different way in my "Digital Copyright and the Possibility of Pure Law," *qui parle* 14 (2003), 21-47. There, I argue that the inability to distinguish original from copy in a digital environment itself makes copyright almost impossible to perform its police function of distinguishing legitimate from illegitimate copies.

the relevant property ("gave away" or "bartered") remedies the problem; in sum, "the exceeding of the bounds of his just property not lying in the largeness of his possession, but the perishing of anything uselessly in it" (II, 46).

I thus propose the following conceptual clarification of "waste" in the Lockean sense: spoilage occurs when (a) there is irrevocably unmet demand, (b) the goods to satisfy that demand already exist, and (c) property claims prevent satisfaction of those demands. These are conditions are individually necessary and jointly sufficient.

(a) Irrevocably unmet demand. If there is no demand for a good, then there is no possibility of wasting it. Locke seems to think that, as a matter of fact, such a situation would never occur, but it makes enough sense in economic terms: if no one assigned any value whatsoever to the work of a once famous recording artist, then the price the record company asked for it would not be of concern. Even here, one should be careful: if there is potential future demand (perhaps archivists, or a decade-specific revival, or as a new form of torture), then it would clearly violate the spoilage proviso to destroy all possible copies of the recording (the master, computer files, all existing copies, etc.).

(b) Goods exist. As I suggested earlier, there is unmet demand for a cure for cancer. However, no current product satisfies that demand. Hence, the problem is not one of violating the spoilage proviso.

(c) Property claims interfere. In the case of intellectual property for which the marginal cost of production is negligible, this criterion will be the primary one for evaluating waste. In the next section, I will discuss how entitlements might induce waste.

5. Access, Deadweight Loss, and Anti-Commons

As limited grants of monopoly rights over the intellectual product, intellectual property claims function in at least three ways to restrict access. The first is as a matter of direct control, the second is a matter of indirect control through monopoly pricing, and third is by creating an anti-commons. In all three cases, the entitlement regime serves as an arbitrary limit on the benefit to the commons that Locke sees in property regimes, and that the provisos seek to preserve.

(1) Control. IPR's are used to control access to the product in question. For example, Microsoft's monopoly on its software can be used to prevent individuals from making copies of it. Password protections make it impossible to access articles online unless one's library has a subscription to the journal in question. Access control measures such as these are the digital equivalents to building fences. As with fences in the real world, one can imagine the enclosure as sometimes justified and sometimes not, with one relevant variable being the extent to which the public depends on access to the commons that has been enclosed. Thus, nineteenth century cases about fencing and enclosure often included discussion of the extent to which such enclosure impeded the public's access to adjacent spaces that remained open.[25] In some situations, the IP claim

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[25] For road access, see, *e.g.*, Rose, "Comedy of the Commons," 112ff; and Carol M. Rose, "The Public Domain: Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age,"

might even deny members of the public access to aspects of their own subsistence or subjectivity. In an analogue to reliance torts, then, one might claim that the creators of these properties failed to leave 'enough and as good' for others, by leaving latecomers in a worse position than they found themselves.[26]

In a different class of cases, there will have been no demand until after the property has been created, as for example, when one first grows apples and then hoards them. In such cases where the access is also of a time-sensitive nature, there is a case to be made for waste. For example, if intellectual property claims are used to prevent access to anti retroviral HIV/AIDS medications, there is a relatively specific window of opportunity, after which individuals who needed those medications will die. Viewed in this light, the moral justice of the global IP regime's inclusion of a clause allowing developing countries to override pharmaceutical patents in the case of health emergencies is clear, as is Thailand's recent usage of that clause precisely to obtain ARV's. Conversely, the U.S. efforts to pursue bilateral free trade agreements that remove a country's right to exercise its override option seem morally dubious at best.[27] Medications hoarded until those who

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Law and Contemporary Problems 66 (2003), 89-110: 96-100. For the distinction between control and price in the IP context, see Boyle, "Second Enclosure Movement," 62.

[26] Gordon suggests that "having changed people's position, the inventor cannot then refuse them the tools they need for surviving under the new condition" (1568). Examples would include a patent on an enzyme that people came to depend on for nourishment, the inventor of Arabic numerals, and (as in the Scientology cases) a preacher who tells people to follow him and then uses copyright to try to stop critique.

[27] For a balanced survey of TRIPs and its problems, see Peter K Yu, "Trips and its Discontents," *Marquette Intellectual Property Law Review* 10 (2006), 370-410. For a case study of Brazil's successful use of the patent override, see William Flanagan and Gail Whiteman, "'AIDS is Not a Business:' A Study in Global

need them have died are wasted in the same sense that apples hoarded until they rot are wasted. In both cases hoarding prevented timely use of the product to satisfy demand. This reading has the advantage of partially grounding the duty to charity in Locke's theory of property. In discussing charity, Locke explains that this right of "*Charity* gives every Man a Title to so much out of another's Plenty as will keep him from extream want, where he has no means to subsist otherwise" (I, 42). There appear to be two independent normative bases for this claim: one, as the remainder of that paragraph and the one following make clear, is the general prohibition on using force to establish power over another. The other, as is evidenced by Locke's use of "surplusage" (I, 42) and his explicit assertion that even failures of charity to not "prove that Propriety in Land … have any Authority over the Persons of Men" (I, 43), is the spoilage proviso. In the "Venditio" essay, discussing the sale price of corn to the poor, Locke defends selling the corn at a high market price, but then adds that if the seller refuses to sell, because he demands more than the buyers can pay, or he:

> Extorts so much from their present necessity as not to leave them the means of subsistence afterwards, he offends against the common rule of charity as a man and if they perish any of them by reason of his extortion is no doubt guilty of murder (*Political Writings*, 342).

Corporate Responsibility – Securing Access to Low-cost HIV Medications," *Journal of Business Ethics* 73 (2007), 65-75. Thailand's efforts have been widely reported; see, *e.g.*, "Thailand Widens Scope of Generic Drugs," *Christian Science Monitor* (Jan. 31, 2007), or Thailand Stuns Drug Firms with Generic Licenses," *Scientific American* (Jan. 25, 2007).

The exact structure of Locke's argument, and in particular which right is the basis for the others may not be entirely clear, but the conclusion is, and it is applicable to current discussions of patents.

(2) Monopoly Pricing. A second way that IPRs restrict access is through monopoly pricing. In particular, the monopoly price set by the property holder will invariably produce a group of "low value users," defined as those who do not access or obtain the product because they value it less than the monopoly price, but more than zero. Since giving these individuals access to the product would not hurt sales – they weren't going to buy it at the monopoly price anyway – and since they represent unmet demand, the situation is not pareto-optimal. Such "deadweight loss," as Damstedt remarks, leads one to conclude that a certain violation of the waste proviso is inevitable in the case of IP.

The problem runs deeper, however. The economic solution to deadweight loss is price discrimination: if each consumer can be charged for the product what she or he is willing to pay, then low-value users will access the product at their price, and high value users at theirs. There are various techniques for price discrimination which basically involve making the lower-priced product less attractive (making it harder to access, contain fewer features, etc) and preventing arbitrage of the lower-priced versions to higher value users (think, in this context, of those who would be willing to buy a CD but who download the song on the Internet anyway). Price discrimination is only as good as market research, and in this context, technologically mediated access to intellectual property promises to make price discrimination substantially more sophisticated, since electronic data collection allows much more extensive profiling of consumers, the disaggregation of consumer groups into smaller and smaller categories, and electronic access controls to keep users segregated into their individual price points.[28] Damstedt points in this context to one theoretical limit to such strategies: however many strata of differential prices one introduces, they will always be more coarsely grained than the spectrum of possible prices at which individual consumers might value the product. These pockets of coarse-grainedness represent pockets of residual deadweight loss, suggesting that the problem of deadweight loss can be reduced but not eliminated.[29]

A second theoretical limit to price differentiation is suggested by Yochai Benkler.[30] Price discrimination imposes a transaction cost in that there is a cost to collect and process the data necessary to fit consumers into price groups. There is also a transaction cost induced by the attempt to stop arbitrage and prevent higher-value consumers from obtaining the product at lower prices than they would be willing to pay.

[28] For a lucid explanation of how this works, see James Boyle, "Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination, and Digital Intellectual Property," *Vanderbilt Law Review* 53 (2000), 2007-39.
[29] Locke's "Venditio" essay offers grounds to suspect that he thinks price discrimination schemes are unjust, because the seller is obliged to sell his own market price to everyone. Locke argues via several examples that selling an item to the needy at a higher price than one would sell it to those not in need is unjust. "Need," however, seems to imply more than necessity: "for if by any artifice he had raised Q's longing for that horse, or because of his great fancy sold it dearer to him than he would to another man he had cheated him too. But what anyone has he may value at any rate he will and transgresses not against justice if he sells it at any price provided he makes no distinction of buyers but parts with it as cheap to this as he would to any other buyer" (341). Since any price discrimination scheme attempts to sell at the demand point specific to a buyer, and not to a market (which is where Locke locates just market price), and since price discrimination schemes also tend to include versioning strategies to increase the apparent market value of a commodity to different buyers, price discrimination schemes are arguably *ipso facto* unjust on Lockean grounds.
[30] "An Unhurried View of Private Ordering in Information Transactions," *Vanderbilt Law Review* 53 (2000), 2063-80.

The combination of these transaction costs imposes a limit to price discrimination strategies: for price discrimination to be complete, it has to account for users who would pay little more than their attention (in Benkler's felicitous phrasing). However, at some point, those users will value the product insufficiently to cover the transaction costs. At that point, a rational producer would stop any efforts at further price discrimination at the bottom of the spectrum, thereby leaving a residual deadweight loss. Benkler argues that several socially important users are precisely the sorts that tend to drop out of price discrimination schemes and therefore present a net social loss to IP pricing: transformative users (such as parodists), those whose work (such as basic scientific research) produces large positive externalities that are not easily captured, and those who provide their work to the public for free (academics, non-profits).

All of this is not to say that IP is inherently immoral. It is to say, however, that there is a prima facie reason to be suspicious of Lockean justifications of it, since at least some spoilage seems inevitable; even if we are willing to accept some of this spoilage, the Lockean proviso proposes a substantial counterweight to strong IP claims made in Locke's name.

(3) Anti-Commons. Finally, we should consider wasted due to excessive transaction costs – *i.e.*, of an anti-commons. As developed in recent theoretical work, an anti-commons refers to a scenario when resources are underutilized because too many parties have veto rights over its use. Thus, in Michael Heller's original example, shop fronts in recently privatized Moscow apartment buildings were left vacant, while vendors set up kiosks in front of them. The problem was that all of the residents had to approve

of any use of the shop fronts; in addition to the pure coordination problems, the system thus encouraged holdouts and strategic vetoing of proposals.[31] Locke of course does not use such terms, but his critique of Filmer indicates that the problem was on his mind, in the form of the so-called "paradox of plenty:" if someone gathers acorns in from the commons, they are his; "and will any one say he had no right to those Acorns or Apples he thus appropriated, because he had not the consent of all Mankind to make them his? …. If such consent as that was necessary, Man had starved, notwithstanding the Plenty God had given him" (II, 28).

We should be particularly concerned when property rights regimes induce the problem, as that would seem to be exactly the sort of thing against which Locke's own provisos are directed. In particular, the spoilage proviso provides resources to develop a critique of anti-commons scenarios, defined as those where the development of productive resources is blocked by property claims, *i.e.*, scenarios where the industrious are prevented from laboring by the entitlement claims of others. Prima facie textual evidence in support of this strategy derives from (a) Locke's repeated use of waste to describe uncultivated land. Such non-cultivation becomes a moral complaint against a property regime when the property regime is the *reason* the land is uncultivated; and (b) the general conceptual point that interfering with the productive use of resources is bad,

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[31] Michael A. Heller, "The Tragedy of the Anti-Commons: Property in the Transition from Marx to Markets," *Harvard Law Review* 111 (1998), 621-88.

as when I let apples that I have gathered rot. Here are two scenarios illustrative of how this argument might work. I offer them to show the compatibility between the Lockean account of justice that I am developing here, and the terms of the anti-commons debate in intellectual property theory.

(a) Patent Thickets. There is a robust literature that suggests that patents are too easy to obtain, both because the bar for innovation is too low, and because patents are expanding in scope to include upstream “process” and “business method” patents. Insofar as licensing requirements for these deter downstream innovation by imposing extra costs on them, they seem to move in the direction of the universal consent problem Locke identifies in Filmer.[32] Sabrina Safrin identifies another possible scenario: in response to Western intellectual property claims, developing countries have taken to invoking access-restricting regimes over their natural resources. These access-restricting regimes create multiple layers of stakeholders, all of whom must be satisfied before any development takes place. As Safrin puts it:

> Multiple ownership interests or rights of exclusion in raw genetic material risk creating an anticommons. For example, let us imagine that Grandma owns a petunia plant, but the government owns the plant's genetic makeup.

[32] For a lucid presentation of this problem, see J. H. Reichman, “Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation,” *Vanderbilt Law Review* 53 (2000), 1743-1798. The Supreme Court recently intervened on the question of obviousness, apparently making it easier to claim that an innovation was “obvious” and therefore not patentable. As Justice Kennedy wrote for a unanimous Court: “the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle, rather than promote, the progress of useful arts” (*KSR v. Teleflex*, 550 U.S. ___ (2007), [24])

> In addition, Grandma's local community holds a stake in the plant's genetic makeup because many members of the community have similar petunia plants on their windowsills. If each of these stakeholders has the right to prevent the extraction of the petunia's genes, it will be extremely difficult and costly to access and utilize that material.[33]

The spoilage proviso offers a normative reason why we should resist these sorts of outcomes.

(b) Documentary Films. There are cases where documentary filmmakers have lost copyright cases over the use of a few seconds of copyrighted material which isn't even directly a part of their film. Insofar as documentary films are a social good, and insofar as such cases substantially increase their cost, it appears that excessive property rights are directly causing films not to be produced. Thus, one film was reported to cost $218 to produce, but over $230,000 in licensing fees. It is important to note in this context that owners' entitlements do not actually need to be enforced against anyone here, and that fair use rights may be of limited utility: since films require upfront investment, since a negative copyright judgment can shut down production, and since fair

[33] Sabrina Safrin, "Hyperownership in a time of Biotechnological Promise: The International Conflict to Control the Building Blocks of Life," *American Journal of International Law* 98 (2004), 641-685: 653. Even if there were not a universal consent problem, the high transaction costs of negotiating agreement among multiple stakeholders would both itself present a barrier to development, and decrease the stability and long-term viability of any settled outcome, as well as create the impression that property rights regimes are not the best norm for allocating resources. Recent work suggests that such multiple-norm scenarios, where the allocation of rights is unclear and unevenly enforced are endemic in developing countries, and significantly inhibit the development of property systems: see Daniel Fitzpatrick, "Evolution and Chaos in Property Rights Systems: The Third World Tragedy of Contested Access," *Yale Law Journal* 115 (2006), 996-1048. For the argument that the sheer complexity of copyright law in the U.S. is a barrier to its efficient operation, see Jessica Litman, *Digital Copyright* (New York: Prometheus Books, 2001).

use is an affirmative defense that can require expensive litigation to invoke, rational filmmakers (and their sponsors and insurers) become risk averse, deciding either aggressively to seek licenses for all possible uses of copyrighted material or to excise it from their work.[34] The negative externality of all of this is a reduction in the commons and the available stock of cultural goods.

Technically speaking, the above are cases of resources not produced, rather than produced and then wasted, and for that reason, I think the connection to the spoilage proviso is less clear in them than with cases such as that of AIDS anti-retrovirals. However, insofar as the argument is plausible – rejecting it, after all, depends on how one articulates the distinction between something being produced and then wasted in the face of unmet need, and a scenario in which it would have been produced to meet a need, but for the property regime – it should be pursued.[35]

6. Morally Limiting Property

So: if IP claims can be given a Lockean foundation, are Disney, the RIAA and Big Pharma right after all? As I hope the above has indicated, the short answer is no. Lockean property rights are ultimately based in his theology and in God's creation of the

[34] See James Gibson, "Risk Aversion and Rights Accretion in Intellectual Property Law," *Yale Law Journal* 116 (2007), 882-951: n29 and accompanying text (for the costs of *Tarnation*), and 887-95 for chilling effects.
[35] In other words, I think that it is not obvious that one should insist on such a distinction.

world. Today, one would no doubt want to insist on a secularized version of the argument. But to preserve the normative strength of the property claim, this secular argument would have to provide a secular version of the natural law claims underlying it. Locke's God is not only creative; he is benevolent, and so Lockean property rights are suffused with a concern that they be benevolent. The two most famous attempts requiring such benevolence are the "enough and as good" and spoilage provisos of chapter 5. These provisos may or may not be sufficient; that Lockean theory could be used to justify the appropriation of Native American lands, and that currently IP is being used to justify the appropriation of indigenous tribal remedies, songs, and so forth, suggests that the road ahead is a difficult one, although Locke can plausibly be read as attempting to protect the commons against excessive appropriations. And he certainly can be read as offering a counter to Grotian claims that property is established by first possession alone. One problem that it is too easy to read the "commons" as deprived of any meaningful content, and thus allowed to appear as empty waste. An important task is therefore to figure out how to provide such meaningful content to the commons or public domain.

Independently of this pursuit, we should explore resources in Locke's own theory to limit property claims. The reasons for this are partly strategic: if IP advocates are going to advance Lockean claims of appropriation, they should be countered with Lockean claims of justice. In other words, the attempt to ground IP claims in Locke is correct in the sense that Lockean theory readily applies to intellectual property. However, that fact does not then justify the conclusion that Locke would endorse the claims of current IP stakeholders. Quite to the contrary: it justifies research into the ways that Locke's efforts to ensure that property regimes are just be properly applied to intellectual contexts as well. Consistency requires at least that much.