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## Moral Obligation and Natural Capital Commons on Private Land: Perspectives on Peter Gerhart's Property Law and Social Morality

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# MORAL OBLIGATION AND NATURAL CAPITAL COMMONS ON PRIVATE LAND: PERSPECTIVES ON PETER GERHART'S *PROPERTY LAW AND SOCIAL MORALITY*

By Blake Hudson<sup>†</sup>

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If we confine the idea of ownership to owners of private property, we constrict the relationship between individuals and a society's resources and suggest that owners of private property have special status, in terms of their control over, and connections with, resources that separate them from other individuals.<sup>1</sup>

## I. INTRODUCTION

Property rights have long been recognized as one of the primary means of resolving commons dilemmas,<sup>2</sup> and indeed property rights often offer elegant solutions to natural resource management challenges. Yet, property rights unconstrained by inputs representing the public interest may also do nothing more than replicate the traditional commons dynamic, at least as it relates to the protection of environmental resources. We may tend to conceive of natural resources (or “natural capital”) on private property as no longer in a commons con-

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1. PETER M. GERHART, *PROPERTY LAW AND SOCIAL MORALITY* 312 (Cambridge Univ. Press 2013).

2. See Garrett Hardin, *Tragedy of the Commons*, 162 SCI. 1243 (1968), available at <http://www.jstor.org/stable/1724745>.

dition, and therefore no longer as prone to tragic over-appropriation by resource users. Yet, the only resource within a property boundary that is no longer in a commons state is the land base itself. While the land base is depletable—one of the two defining elements of commons resources—property boundaries eliminate the second element, non-excludability.<sup>3</sup> Indeed, the right to exclude others from one's property, as highlighted in Peter Gerhart's book, *Property Law and Social Morality*,<sup>4</sup> is a defining indicia of property ownership. Recent theory assessing the nature of natural capital on private land,<sup>5</sup> however, demonstrates that notwithstanding privatization of the land base, the natural capital present on private land remains in a commons status, and is just as subject to tragic overuse and overconsumption as the pastoral resources described in Hardin's *Tragedy of the Commons*.<sup>6</sup> As with Hardin's grass, these resources also remain just as crucial to the well-being of the broader community, which we might describe as "the public." In this way, we can describe natural capital on private land as "privatized commons resources."<sup>7</sup>

Why does this theoretical description of natural resources on private land matter? As detailed in this Article, the description matters primarily because it allows greater public control over private resource use—control unfettered by complications presented by legal theories like the regulatory takings doctrine. Gerhart's theory provides a critical element to making privatized commons resource theory legally defensible. To legally demonstrate that property owners maintain no baseline unfettered right to appropriate natural capital as they please, it is first necessary to demonstrate that they maintain a legal duty or obligation. If they maintain such a legal obligation, then society, in turn, is under no legal obligation to compensate property owners for limitations on their ability to consume (or "appropriate") natural capital on their land.

Critics of privatized commons resource theory might argue that the legal right to exclude others includes not only physical exclusion from

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3. On the elements of depletability and non-excludability, see Robert O. Keohane & Elinor Ostrom, Introduction to LOCAL COMMONS AND GLOBAL INTERDEPENDENCE 1, 13 (Robert O. Keohane & Elinor Ostrom eds., 1995); Oran R. Young, The Problem of Scale in Human/Environment Relationships, in LOCAL COMMONS AND GLOBAL INTERDEPENDENCE 27, 29 (Robert O. Keohane & Elinor Ostrom eds., 1995); Duncan Snidal, The Politics of Scope: Endogenous Actors, Heterogeneity and Institutions, in LOCAL COMMONS AND GLOBAL INTERDEPENDENCE 47, 50 (Robert O. Keohane & Elinor Ostrom eds., 1995); Steven Hackett, Dean Dudley & James Walker, Heterogeneities, Information and Conflict Resolution: Experimental Evidence on Sharing Contracts, in LOCAL COMMONS AND GLOBAL INTERDEPENDENCE 93, 95 (Robert O. Keohane & Elinor Ostrom eds., 1995).

4. GERHART, *supra* note 1.

5. Blake Hudson, *Constitutions and the Commons: The Impact of Federal Governance on Local, National, and Global Resource Management* (2014).

6. Hardin, *supra* note 2, at 1245.

7. Blake Hudson, *Commerce in the Commons: A Unified Theory of Natural Capital Regulation Under the Commerce Clause*, 35 HARV. ENVTL. L. REV. 375, 377 (2011).

one's land but also exclusion from decisions regarding the appropriation of natural capital on one's land. This criticism would posit that "true" commoners, on the other hand, do not maintain a legal right to exclude others from appropriating natural capital that they might otherwise appropriate (nor any corresponding obligations), and this is why they are unable to leverage any rights to negotiate solutions to commons tragedies. Gerhart's theory fills this gap by demonstrating that just like "true" commoners, when left to their own devices private property owners are under no compulsion to preserve the resources on their property, and therefore may not be excluded from doing so unless they voluntarily constrain themselves (through private contract) or are constrained by an external entity (in the form of the government). However, property owners do not maintain a baseline right to exclude others from decision-making regarding their appropriation (or consumption) of natural capital. This right does not exist because, as per Gerhart's theory, owners maintain a moral duty—which may manifest through positive law—to use the resources on their property in an other-regarding manner. In turn, society should utilize the veil of ignorance to determine exactly what those duties are so that it can codify them in positive law. In this context the veil of ignorance would ask: how might objective property owners today want resources to be managed if they did not know when they might be born, now or far into the future?<sup>8</sup> The answer to that question defines the scope of property owner obligations. In this way, natural capital on private land remains depletable, non-excludable commons resources, and the state therefore may become a necessary party to its management in the absence of coordinated, altruistic action on the part of property owners or a holistic scheme of successful private contractual arrangements.<sup>9</sup> In addition, because a duty may be imposed on property owners by the state, arising out of this manifestation of moral notions of the appropriate distribution of benefits and burdens of property ownership and resource use, restricted *use* of the resources on one's property cannot give rise to claims of just compensation under the Takings Clause of the Fifth Amendment of the U.S. Constitution. As Gerhart claims, this constitutional limitation should only apply when the state restricts in some way a property owner's right to exclude others from the land base (or their portion of it).

This Article makes a simple and hopefully straightforward attempt to demonstrate how Gerhart's property theory fills the gaps in privatized commons resource theory. Part II describes in more detail privatized commons resource theory, while Part III discusses Ger-

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8. James Rasband, James Salzman, and Mark Squillace, *Natural Resources Law and Policy* 20 (2009).

9. See Blake Hudson & Jonathan Rosenbloom, *Uncommon Approaches to Commons Problems: Nested Governance Commons and Climate Change*, 64 *HASTINGS L.J.* 1273, 1274–75 (2013).

hart's theory both generally and more specifically in the context of natural resources management. This Part first analyzes Gerhart's explicit grappling with the commons broadly, and more directly wrestles with how his theory lays a legal framework for addressing temporal commons and the interests of future generations in natural capital. Next, this Part discusses the role of positive public law in manifesting society's moral choice regarding natural capital appropriation. Finally, this Part addresses the weaknesses of traditional law and economics analysis, as highlighted in both privatized commons resource theory and Gerhart's theory, and how it does not adequately account for society's interest in natural capital. Part IV concludes.

## II. PRIVATIZED COMMONS RESOURCE THEORY

Recent scholarship has re-conceptualized natural resources present on private and public land as remaining commons resources overlaid by a property rights system.<sup>10</sup> This reconceptualization is important for two reasons. First, as a policy matter it symbolizes that resources on private land are just as at risk of tragic overuse as they would be in a traditional common-pool resource system. Second, it demonstrates as a legal matter that the public maintains interests in private property owners' use of resources that ultimately trumps private property interests if positive law restricts those uses—resources on any one private property owner's land remain in a common-pool shared with the public (including future generations).

As noted in the Introduction, while the land base is no longer a common-pool commons resource<sup>11</sup> once privatized, the natural capital on that land constitutes depletable resource units<sup>12</sup> of natural capital often appropriated by individually rational private property owners from the resource system<sup>13</sup> that is the collection of private properties constituting the "environment." This conceptualization therefore satisfies the depletability prong of the test for determining whether resources are considered of a commons nature. The non-excludability element is also satisfied because no private property owner can be excluded from appropriating the resource unit of natural capital over which she maintains control in the absence of either horizontal, voluntary contractual agreements with neighboring property owners or vertical government regulation. As commons scholars have noted, commons resources are "subtractable resources managed under a

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10. Hudson, *supra* note 5.

11. See GERHART, *supra* note 1, at ix–xi (a common-pool resource is to be distinguished from open access. Open access signifies unlimited entry, but common-pool resources are accessed by a limited set of users, in this case a particular group of property owners).

12. ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 30 (James E. Alt & Douglass C. North, eds., 1990).

13. *Id.*

property regime in which a legally defined user pool cannot be efficiently excluded from the resource domain.”<sup>14</sup> Without mechanisms of exclusion in place, private property owners may seek to rationally<sup>15</sup> maximize short-term economic interest—often through the clearing of natural capital for development—while the long-term cost to the environment is spread across the public at large (again, including future generations). We can see these aggregated effects in the urban sprawl that has increasingly fragmented habitat and contributed to air and water quality problems across much of the United States.

I will not delve too deeply into the relevant commons literature in this Article, as it is covered in depth elsewhere. But the way in which key terminology—like “resource unit,” “resource system,” “appropriators,” “co-appropriators” and other terms<sup>16</sup>—are defined in the commons literature supports privatized commons resource theory. Critically, if we define one resource unit of natural capital with reference to one set of private (or government) property boundaries, and the resource system as the broader environment made up of a collection of private and public properties, then private property owners are no different from traditional commons herders. In a traditional common-pool resource system an individual herder *can exclude* others from “resource units,” just as a private property owner can exclude others from coming onto his or her property. What a herder cannot exclude are other herders from extracting other resource units of natural capital from the resource system. Both the pasture and the natural capital on private land remain constituent components of a commons resource system. Ostrom makes this clear when she states that though a resource system can be jointly held and multiple appropriators can appropriate resource units from the system, the resource units themselves “are not subject to joint use or appropriation.”<sup>17</sup> Consider a thought experiment involving landowners X and Y, whose private properties are adjacent to each other. Both X and Y control a resource unit of natural capital defined by his or her respective property boundaries. These resources are depletable and the natural capital within the resource system—that is, across the collection of private

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14. SUSAN J. BUCK, *THE GLOBAL COMMONS: AN INTRODUCTION* 5 (1998). AS Carol Rose has pointed out:

Indeed a private property regime itself—whether governmental or customary—may be understood as a managed ‘commons’—a meta-property held in common by those who understand and follow its precepts. In a sense, a movement toward private property is a movement from a ‘commons’ in a physical resource to a ‘commons’ in the social structure of individualized resource management.

Carol Rose, *Comedy of the Commons*, 53 U. CHI. L. REV. 711, 746-47 (1986) (emphasis added).

15. Blake Hudson, *Federal Constitutions: The Keystone of Nested Commons Governance*, 63 ALA. L. REV. 1007, 1010 n. 6 (2012).

16. OSTROM, *supra* note 12, at 30–41.

17. *Id.* at 31.

properties—is non-excludable. The question of non-excludability does not mean that X cannot exclude Y from X’s property or vice versa. Rather, the question from the perspective of others within the resource system (other property owners and the public) is how difficult, if not impossible it is to exclude X or Y from appropriating the one resource unit of natural capital over which they maintain control absent external controls. In this way:

Just as two herders cannot occupy the same spot in the pasture, nor can their cattle graze the exact same blades of grass, no two private property owners’ parcels of land can occupy the same spot, nor can their bulldozers remove the same natural capital. Herders may move around in the pasture, just as X and Y may legally swap properties an infinite number of times. Or herders may remain stationary and increase their herd until their herds merge, just as private property owners may remain stationary until a Walmart parking lot abuts a Best Buy parking lot. In each case, however, the pasture and private lands from which the resource units of natural capital are appropriated remain a part of a system that is a natural capital commons. It is equally impossible to exclude herders or private property owners from appropriating the natural capital resource units available to them in their current position in both space and time.<sup>18</sup>

As this thought experiment demonstrates, and as Ostrom observed, the primary contribution of a private property rights system to natural capital management is to pit each property owner “against nature in a smaller terrain, rather than . . . against another player in larger terrain.”<sup>19</sup> Indeed, justifications for private property as a means for solving commons dilemmas often reference property’s role in safeguarding an owner’s assets.<sup>20</sup> Yet what is lost in that analysis is that property largely plays this safeguard role only in an economic sense. Property rights in land does not inherently entail safeguarding environmental resources or services on the property that may, of course, be of interest to the individual property owner,<sup>21</sup> but that are most certainly of interest, in the aggregate, to the broader public. A party may own 100 acres of pristine forest that provides flood control, water retention, air quality, species habitat, and other ecosystem services,<sup>22</sup> and yet the property owner may develop the entire acreage

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18. Hudson, *supra* note 15, at 1045.

19. Ostrom, *supra* note 12, at 12.

20. Rasband, *supra* note 8, at 70.

21. Of course private property can be used to protect natural resources just as it may be used to destroy it. The benefit of strong property rights protections is if someone wants to leave all of the natural capital on their property untouched they have a legally protected right to do so. Though even this is not absolute. Some property regimes, such as the prior appropriation system in the west, actually punish property owners for not consuming the resource.

22. See Ecosystem Services, USDA FOREST SERV. (Oct. 1, 2013 9:48 AM), <http://www.fs.fed.us/ecosystemservices/>.

into a strip mall and an associated parking lot. The property owner's assets are safeguarded, but the natural capital is gone and so too are the public's assets in the form of ecosystem services.<sup>23</sup> The complete replacement of natural capital with human-made capital in an effort to rationally maximize economic interests provides the developer here with a 100 percent return for her use of the property, but she only suffers a fraction of the negative cost imposed by impervious surfaces, the heat island effect, increased flooding, loss of habitat, and loss of carbon sequestration capabilities, to name only a few harms. Those costs are spread across the collection of private and public properties in the region, and are further spread temporally since those costs are foisted on future generations. These are the attributes of a commons.

Indeed, property owners are often incentivized to maximize economic returns by engaging in just this type of land use transition, as metrics of economic well-being are tied heavily to land use development that appropriates natural capital.<sup>24</sup> So while we tend to conceive of the traditional commons story as starting with a pasture unbounded by property lines and open to herders with equal access, we rarely ever ask how Hardin's rational herder came to have pasturelands in the first place. Upon making this inquiry we might conclude (as described in another thought experiment):

Perhaps a private property rights system was already in place and the rational herder simply bought the property from a rational forester, who had managed the land for forest products until a shift in the market simultaneously caused the forest products industry to move overseas and agricultural products like grass and sheep to become more valuable. Thus the rational herder came to own the property by paying the rational forester a nice sum . . . and then converted the property from forest land to agricultural land with a plentitude of grass resources. Though grass resources remained, the trees were gone, and gone too were the services they provided and other resources present in the forest. Though an individual herder or forester can legally exclude others from accessing his or her property, no individual herder, forester, or other property owner can, in the absence of government regulation . . . be excluded from either appropriating the natural capital on one's property or from selling it to another who will. So even though the forester's trees were

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23. While some may argue that public restrictions on the right of a property owner to so appropriate those resources eviscerates the "safeguarding of assets" role of private property, it is seems clear that private property owners maintain no legal entitlement to hold resources crucial to public well-being hostage under a private property regime—especially when there are sound arguments that the property regime is ultimately focused on protecting a property owner's right to exclude, as articulated by Gerhart, rather than a right to use natural resources. Furthermore, restrictions on an owner's use of property need not restrict *all* use, but rather may attach conditions to use such that a property owner must set aside certain acreage to preserve resources and services, rather than develop the entire property.

24. Hudson, *supra* note 15, at 1039–41.



fenced in and privatized, as was the subsequent herder's pasture, a "tragedy" is likely to occur at each step in the chain of ownership regarding various important natural resources—even in the presence of a private property rights system.<sup>25</sup>

Next, consider a later step in the chain of ownership:

Assume that a herder with privatized pasture lands is approached by a rational grocer, who wants to develop a market to sell various agricultural products for human consumption. Because market demand for grocery products is high, the grocer is able to offer the herder an attractive sum of money for the land . . . As a result, incentives are aligned for an increasing number of herders to sell their pasture lands to an increasing number of grocers. Once the grocers obtain a private property interest in the pasture lands it is difficult to exclude their appropriation of depletable natural capital in the absence of government intervention or internal arrangements among grocers. What becomes of the grass? In establishing their places of business, the grocers rid the land of the grass, construct their markets, and pave the property to allow customer parking. Not only is the grass gone, but ambient temperatures in the region rise due to the urban heat island effect, impervious surfaces on the property lead to pollution and greater risk of flooding downstream, the population's water supply is potentially reduced as groundwater aquifer recharge is slowed, and carbon sequestration capabilities are eliminated, to name a few environmental harms. In other words, the grocers' complete replacement of natural capital with human-made capital in an effort to rationally maximize their economic interests provides them with a 100 percent return for their use of the property, but they only suffer a fraction of the negative cost imposed by impervious surfaces, the heat island effect, increased flooding, and loss of carbon sequestration capabilities. Those costs are spread across the collection of private properties in the region.<sup>26</sup>

These thought experiments demonstrate how similar private property owners operate relative to the traditionally conceived commons herder. Yet, though the resources remain in a common-pool condition, a manifestation of the broader public's interest in how those resources are being managed, the rights associated with utilization of resources on land are often viewed synonymously with the property rights attaching to the land itself. This conflation of property rights in resources and rights in land is especially prevalent among property rights advocates who resist virtually any governmental limits on resource use for the supposed benefit of the public.<sup>27</sup> So in this view,

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25. Hudson, *supra* note 7, at 391.

26. Hudson, *supra* note 15, at 1043–44.

27. JOHN D. ECHEVERRIA, PROPERTY VALUES AND OREGON MEASURE 37: EXPOSING THE FALSE PREMISE OF REGULATION'S HARM TO LANDOWNERS 4 (Georgetown Envtl. Law & Policy Inst. 2007), available at [http://www.gelpi.org/gelpi/current\\_research/documents/GELPIMeasure37Report.pdf](http://www.gelpi.org/gelpi/current_research/documents/GELPIMeasure37Report.pdf) (considering Oregon's referendum Measure 37, which required either compensation for the adverse economic

restricting a property owner's ability to destroy a unique ecological habitat to develop a condominium on a piece of coastal property is equivalent to restricting access to the land or forbidding a property owner from excluding others from the land,<sup>28</sup> the latter two actions being sacred indicia of land ownership (the right to access and the right to exclude). The rationale underpinning the regulatory takings doctrine exemplifies this view<sup>29</sup>—that is, regulations that (supposedly) wipe out all economic value of a piece of property<sup>30</sup> or overly burden the investment-backed expectations of property owners to benefit the public<sup>31</sup> are often characterized as the functional equivalents of eminent domain and the physical taking of property.<sup>32</sup>

A conflation of rights in land and rights in resources, however, cannot be reconciled with the modified property regimes that have arisen regarding many resources characterized as fugitive, and therefore more readily recognized as common-pool resources. Consider oil and gas, water (including groundwater), wildlife, and fisheries, to name only a few examples. These resources move, and this motility is a very visible manifestation of their fungibility. This fungibility, in turn, means that one property owner's use of the resource necessarily implicates the rights of others to have access to and potentially use those resources in the future. While these resources may be "captured,"<sup>33</sup> property rights in the resources are constrained by duties owed to others (correlative rights in water and oil and gas,<sup>34</sup> preventing over-exploitation of wildlife through the wildlife trust doctrine,<sup>35</sup> the duty not to negligently waste oil and gas when captured at the surface<sup>36</sup>). These constraints make property rights in these resources readily subject to public controls without any obligations under a just compensation regime, unlike a number of other property rights, such as the right to exclude others from land, the right to sell, the right to transfer property to descendants, and so on. Of course, the right to use land—

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effects of regulations or a government waiver of enforcement of the regulations. A study of the effects of Measure 37 found that in virtually every instance of a claim of diminution of property value due to regulation, the government granted a waiver); *but cf.* MEASURE 49 GUIDE, (Dep't of Land, Conservation, & Dev. 2008) available at [http://www.oregon.gov/LCD/MEASURE49/docs/general/m49\\_guide.pdf](http://www.oregon.gov/LCD/MEASURE49/docs/general/m49_guide.pdf) (showing Measure 37 has since been significantly limited in application by Measure 49).

28. *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1008–17 (1992).

29. WILLIAM MICHAEL TREANOR, *THE ORIGINAL UNDERSTANDING OF THE TAKINGS CLAUSE*, 5 (Georgetown Envtl. Law & Policy Inst. 1998), available at [http://scholarship.law.georgetown.edu/gelpi\\_papers/2/](http://scholarship.law.georgetown.edu/gelpi_papers/2/).

30. *See Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992).

31. *See Penn Central Transportation Co. v. New York City*, 438 U.S. 104 (1978).

32. GERHART, *supra* note 1.

33. *See* PAUL GOLDSTEIN & BARTON THOMPSON, *PROPERTY LAW: OWNERSHIP, USE, AND CONSERVATION* 234 (1st ed. 2006).

34. *See id.* at 240, 263.

35. *See* Blake Hudson, *The Public and Wildlife Trust Doctrines and the Untold Story of the Lucas Remand*, 34 COLUM. J. ENVTL. L. 99, 111–12 (2009).

36. GOLDSTEIN & THOMPSON, *supra* note 33, at 235–42.

which includes the right to utilize resources upon it—is one stick in this bundle of property rights. Even so, rights in the use of land have never been absolute, as evidenced by common law doctrines like nuisance. Similarly, for the foregoing reasons, rights to use the land itself may be limited in circumstances where doing so would unreasonably harm the public's interest in the natural capital that may be displaced through that use. In short, unrestricted utilization of resources on land has never been a guaranteed aspect of ownership. To place it on par with the right to physically exclude, in our understandings of takings jurisprudence or otherwise, is simply an intellectual misstep.

Indeed, we are beginning to understand that resources anchored to the land are no less fungible simply because they lack motility. Take wetlands, for example; the wetlands themselves may be anchored to specific parcels of property, but it is the interface with fugitive resources (water) that defines the value of wetland resources to society. This interface often stretches across numerous properties in one continuous whole, regardless of the fact that many landowners' property lines may bisect the wetland. And even when wetlands do not stretch across properties and are otherwise considered “isolated,”<sup>37</sup> their role in the hydrologic cycle implicates surrounding properties. Other resources, like forests, also may be viewed as fungible or “fugitive” given new understandings of their functionality. For example, if one characterizes forest resources as providing building materials, paper products, energy resources in the form of biofuel, and energy cost savings for households and businesses, then their anchoring to individual properties might be viewed as supporting the same property rules that run with the land itself. But when we understand forest resources to also provide clean air services that filter and trap air pollutants; clean water services that prevent nutrient, chemical, and other non-point pollution from entering waterways; protection of fisheries through mitigating run-off pollution and regulating stream temperatures; flood control services; residential energy savings; important habitat for diverse species; regulation of local ambient air temperatures in urban and rural areas; aesthetic, spiritual, cultural, and recreational values; and—perhaps most importantly—a global carbon sink that regulates climate, then forests are no less fungible than water, oil and gas, or wildlife. The interface between forests and fugitive water, air, and biodiversity, render forest resources traditionally considered the proprietary interest of the property owner very much a public, common-pool resource when aggregated across private properties.

While the fugitive nature of some resources, like air and surface water, may cause us to consider these resources less subject to privatization than others, we also tend to (mistakenly) think of true com-

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37. Blake Hudson and Michael Hardig, *Isolated Wetland Commons and the Constitution*, 2015 BYU L. REV. (forthcoming 2015).

mons resources as subject to appropriators that are mobile. The herders in the commons fable, after all, roam around on Hardin's pasture as they graze their cattle. This is why we often hear the refrain that a prototypical commons in modern times is an ocean fishery. It is true that a private property owner cannot move the use of his or her property around the surrounding environment comprised of other private properties (e.g., the commons). But we have other examples of commons appropriators that are quite stationary. Consider the users of groundwater aquifers, which are widely considered another prototypical commons resource. The parties withdrawing water from the aquifer are anchored to the surface and engage in their extraction activities within defined property boundaries (and indeed are most often restricted to using that water only on that property<sup>38</sup>). Although the appropriators are not mobile, their unchecked, rational consumption of the resource may lead to its degradation and destruction. Thus, society has established modified property regimes to allocate rights in groundwater resources.

Groundwater aquifers-as-a-commons indicate that it is not the mobility of the appropriator that makes a commons, but rather the intensity of "co-appropriators"<sup>39</sup> unchecked use of the resources making up the commons—co-appropriators who may very well be anchored to particular parcels of property, just as private forest owners may appropriate forest resources above the surface. Each of Hardin's herders, after all, could stand immobile in one spot of the pasture, but continue adding cattle until eventually one herder's cattle merge with the cattle of another herder standing a good distance away. It is the increased intensity of use by the addition of more cattle that drives the resource tragedy. This is the same mechanism by which private property owners may remain stationary while still appropriating natural capital with increasing intensity in an unchecked fashion. This element of property ownership is often overlooked in property theory. For example, Gerhart highlighted Demsetz's view that creating private property rights reduces the overuse associated with common access regimes.<sup>40</sup> Demsetz view, however, does not account for changes in the *intensity of use* of land that removes one resource to make room for another use, the latter of which may simply be a feat of human engineering that leaves little natural capital in place, such as a parking lot and big box retailer.

Ultimately, property rights in natural resources anchored to land can be distinguished from rights in the ownership and use of the land base itself, primarily based upon their non-stationary, fugitive function in providing services to society. In this way we can conceive of privatized commons resources as remaining in a commons condition:

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38. GOLDSTEIN & THOMPSON, *supra* note 33, at 263.

39. OSTROM, *supra* note 12, at 12.

40. GERHART, *supra* note 1, at 97.

the broader society, represented by other property owners and non-owners, maintains a vested interest in the resource over which any single property owner maintains control. That property owner, in turn, may appropriate those resources to the detriment of the aggregated collection of private property owners unless constrained from doing so.

So in summary, we have two ways of looking at resources on private land: (1) as common-pool commons resources in which the public has a legal interest due to the corollary legal duty of the property owner to utilize resources in an other-regarding, moral manner or (2) as subject to unrestricted control by the property owner, who must be compensated if and when restrictions do emerge. But even the most ardent property advocate would admit that unrestricted utilization of resources subject to private control and ownership has never been a part of their bundle of sticks—hence a reasonable use rule for groundwater resources, nuisance law, and many other traditional restrictions on landowners' ability to use resources. So, admitting that there is no absolute right to unrestricted use of resources, it is unclear how property owners can claim that absolute restrictions on use of certain resources are legally deficient and warrant just compensation under regulatory takings analysis.<sup>41</sup>

Viewing natural capital on private lands as common-pool assists us in separating analysis of property rights in natural capital from the relatively unassailable property rights to exclude, to access, to transfer, and to bequeath the land upon which natural capital is situated. By re-conceptualizing the state of rights in natural capital as tracking a commons, rather than as a private resource whereby otherwise tragic externalities are now magically internalized, we can see from a policy perspective that the tragic plight of resources remains, only in a different form. As a result, society should be more serious about ensuring the public's interests in those resources are captured, through positive law or otherwise. Property rights are supposedly a means of resolving commons dilemmas, and should not be exacerbating them by institutionalizing the commons dynamic. In addition to this policy point, privatized commons resource theory demonstrates as a legal matter that the public maintains interests in a private property owners' use of resources that ultimately trumps private property interests if positive law manifests restricting those uses. This is because, as detailed in the next Section, property owners maintain a legal duty, arising out of social moral norms allocating the benefits and burdens of ownership, to be other-regarding in the management of natural resources.

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41. See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1030 (1992).

### III. PROPERTY LAW, SOCIAL MORALITY, AND PRIVATIZED COMMONS RESOURCE THEORY

A system of property law is a statement about what a society values when it must choose between various ways of shaping systems for making decisions about resources.<sup>42</sup>

Peter Gerhart's book, *Property Law and Social Morality*, makes a number of important and unique contributions to property theory, helping us to better understand when property rights arise and to determine the scope of those rights. Gerhart defines private property as "dominion over a resource that is constrained by the obligation to act as one would if the decisions about the resource appropriately assigned the burdens and benefits of resource use."<sup>43</sup> The purpose of property law, according to Gerhart, is not to address "relationships between individuals over things," but rather to provide a framework for individuals to work out "an appropriate assignment of the burdens and benefits of decisions about a resource."<sup>44</sup>

Seeking to break the entrenched view that property owners and non-owners have conflicting interests, Gerhart seeks a theory of property law where the same set of values that gives rise to property rights also limits those rights.<sup>45</sup> Gerhart characterizes his theory as establishing, for example, a single point of origin, based on social values, for both the right to exclude and limitations on that right. Similarly, in the context of common law nuisance the obligation to be neighborly arises because "the values that allow one to be free from interference by a neighbor are the same values that restrict an owner's use of her property."<sup>46</sup>

Gerhart posits that property rights arise when individuals maintain no duty to look out for the well-being of other individuals, and limitations on property rights manifest when an owner does have responsibilities to others.<sup>47</sup> Under Gerhart's duty principal, "an individual's obligations come from a decision the individual has made," and these duties "arise when an individual makes a decision from which it can be reasonably inferred that the individual, if acting morally, would understand that the decision implies the obligation to take into account the well-being of others when making future decisions."<sup>48</sup> In other words, by making certain resource management decisions, owners accept that they owe obligations to others. This, of course, is obvious in the case of a property owner who operates a coal smelter in a way that

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42. GERHART, *supra* note 1, at 8.

43. *Id.* at 56.

44. *Id.*

45. *Id.* at 5.

46. *Id.* at 12.

47. GERHART, *supra* note 1, at 5.

48. *Id.*

harms a neighbor's property and is therefore a nuisance.<sup>49</sup> As alluded to in the previous section and discussed in greater detail later, however, once we recognize that there is one such circumstance where obligations arise (nuisance, e.g.) then the question simply becomes where to draw the line. This is arguably the most significant contribution of Gerhart's work—that it advances notions of property owner obligations beyond narrowly construed, longstanding legal precedents, like common law nuisance. In this way, Gerhart provides a foundation for recognizing that it is not always the readily observable, easily measurable damages from operating a coal smelter that give rise to landowner obligations, but also aggregated small harms over time, the damage of which may not be measurable except by future generations and long after harm has already occurred. In this way, natural capital appropriation on private land has the potential to be death by 1,000 cuts, or over 1,000 years, even if individual appropriations do not appear harmful enough to rise to the level of common law nuisance.

Indeed, "reasonableness" as a standard for adjudicating nuisance claims suffers from an inherent constraint—it can only apply to what is observable in the here and now, and does not take into account temporally aggregated impacts of property development activities. Natural capital appropriation more often gives rise to the latter problem, not the former. The reasonableness of property owners, therefore, should be judged by information gained through scientific inquiry regarding the harm caused, for example, by forest and wetland loss and associated habitat fragmentation, as well as by reference to the drivers of those problems in the form of poor land use planning leading to urban sprawl and other development maladies. Indeed, in a point of departure from my general agreement with Gerhart's positions, I would quibble with one of his assertions on this topic. Gerhart states (in passing) that "[t]he obligation to be other regarding does not . . . require that an individual deciding whether to use her property for a cornfield or a cigar store take into account anyone else's well-being."<sup>50</sup> But this overlooks the common-pool nature of resources and that if everyone (or many people in areas with critical habitat) maintained a baseline legal right to use their property as a cornfield or a cigar store there would be serious environmental consequences in the aggregate. Think of Florida's scrub ecosystem, replaced by orange orchards, which have since been replaced by just these types of developments. It is not surprising that Florida is facing biodiversity, water quality, and other crises. In this way, Gerhart's other-regarding duty may apply more broadly than even he originally conceived.

Regardless, since under Gerhart's theory "each individual is charged with responsibility to account for the interests of others in a

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49. See *McCarty v. Natural Carbonic Gas Co.*, 81 N.E. 549 (N.Y. 1907).

50. GERHART, *supra* note 1, at 115–16.

morally appropriate way,”<sup>51</sup> how would his theory hold individuals to this standard? Gerhart answers that the rights individuals maintain regarding the use of their property are subject to social recognition, which in turn may constrain a property owner’s decisions regarding that use.<sup>52</sup> That constraint arises through political processes,<sup>53</sup> which of course may range from legislative action in the United States Congress, to state legislatures, to local zoning boards that reflect broader community values than merely a handful of property owners’ interests. Constraint may also arise out of the common law as manifested through judicial ruling (nuisance, for example).

Gerhart’s social recognition concept,

signifies that in a broad sense owners exercise their rights on behalf of the community, performing a function that the community asks of them (to make decisions about the resource), but subject to implicit obligations the community imposes as a condition for recognizing the rights. . . It implies that property regimes reflect an overall social compact, and that owners are agents for the community, exercising powers given by the community under constraints imposed by the community.<sup>54</sup>

Under this conception, the state is not separate from the community whose moral understandings shape property rights’ role in managing resources, but rather is “an institutionalized forum in which disputes about property resources are resolved.”<sup>55</sup> After all, “[i]nstitutions of governance (such as courts and legislatures) are themselves socially recognized” and “social recognition suggests that recognition of the sovereign is recognition of the sovereign’s right to decide who makes decisions about resources, as well as shared recognition that decisions made by the sovereign are worthy of respect because of their source.”<sup>56</sup>

Perhaps the most compelling example Gerhart provides of the social recognition concept in property is slavery. For a time in our country ownership of other persons as property was accepted by government institutions; executive, legislative, and judicial. Shifting societal views manifested in community beliefs that people as property was inappropriate.<sup>57</sup> Over time, though prior acceptance by society “highly influenced state recognition of that form of property,” institutions began to reflect social recognition, and “states began to change the formal legal recognition that justified slavery.”<sup>58</sup>

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51. *Id.* at 13.

52. *Id.* at 15.

53. *Id.* at 35.

54. *Id.* at 50.

55. GERHART, *supra* note 1, at 80–81.

56. *Id.* at 81.

57. *Id.* at 79–80.

58. *Id.* at 101.



So, having established that property owners are morally (and thus legally) obligated to be other-regarding in their management of resources, and that social recognition manifesting in positive law (or the courts) forms the basis for codifying that duty, how does society actually determine what to recognize as appropriate forms of property ownership? In other words, how does society determine what appropriate obligations or duties should fall on property owners in their management of resources? Gerhart argues that we should utilize the veil of ignorance because it “provides a way of thinking about the values that one ought to take into account when making decisions.”<sup>59</sup> John Rawls veil of ignorance effectively challenges one to strive for objectivity through bias reduction by asking: how would you want society to be governed if you had no idea whether you were rich or poor, male or female, or black or white? In the property context, how would you want resources to be managed by private property owners if you were a non-owner, or a neighboring property owner, or a property owner elsewhere who merely valued a particular resource over which you maintained control? This exercise helps us “determine which party has an entitlement to be free from harm; that, of course, is the question of what the law is.”<sup>60</sup> In other words, the veil of ignorance is a useful “methodology for determining what assignment of burdens and benefits can be called moral.”<sup>61</sup> Gerhart uses the veil of ignorance and moral obligation to challenge conventional notions of resource ownership and management. Gerhart argues: “It would be beneficial to change our conception of ownership. An alternative meaning of ownership would connote some measure of control over, and connection to, a resource. It would therefore create a bond between an individual and the resources subject to the individual’s decision making and control.”<sup>62</sup>

The following subsections detail how Gerhart’s notion of ownership calls for change in conceptions of property rights in natural resources and addresses a number of issues arising under privatized commons resource theory. Specifically, these issues are: (1) the intersection of social morality and natural resources; (2) spatial and temporal coordination of natural resource management; (3) the role of public law in codifying private property owner duties regarding natural resource management; and (4) the deficiencies in traditional law and economics theory that are remedied by Gerhart’s property theory in tandem with privatized commons resource theory.

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59. *Id.* at 155.

60. GERHART, *supra* note 1, at 157.

61. *Id.* at 21 (citing JOHN RAWLS, A THEORY OF JUSTICE, 13-22, 136-140 (Harvard Univ. Press 1971)).

62. *Id.* at 312.

A. *Property Law, Social Morality and Natural Resources*

There are many different categories of resources subject to property ownership, but Gerhart often discusses natural resources when exploring appropriate other-regarding behavior of property owners. Gerhart references wetlands,<sup>63</sup> waterways and air,<sup>64</sup> endangered species,<sup>65</sup> trees,<sup>66</sup> and the broader ecological systems of which these resources are a part<sup>67</sup> as resources that require property owners to “adjust their understanding of rights and obligations in order to reflect broader community values . . . .”<sup>68</sup>

Indeed, the balance struck between private property rights and positive environmental law in the United States demonstrates the societal tension regarding the question of “[w]ho ought to make decisions about resources and how ought those decisions to be made?”<sup>69</sup> Gerhart’s view is that a theory of property should not concern itself with “what we get out of a resource,” but rather “what values a community expects an individual to use in making decisions about resources.”<sup>70</sup> The focus from this perspective is “on the values that people bring to their relationships with others when making decision[s] about resources” rather than “on the relationship between individuals over things they value.”<sup>71</sup> Natural resources, after all, are not useful or important only to the property owner, but also to the broader society. As Gerhart argues, “[t]he claim ‘I possess and therefore I own’ presupposes a community’s recognition that the claimed resource can be privately owned; no claim to possession of waterways or air would give the claimant a right to exclude others.”<sup>72</sup> As discussed in the prior Section, air and water are resources clearly seen by society as not subject to strict proprietary rights. Yet, society depends heavily on forests, biodiversity, wetlands, and other resources where notions of strict proprietary rights do remain. While air and water are perhaps more crucial to basic human survival over the short term, forests, biodiversity, wetlands, and other resources that may be anchored to identifiable private properties rest along the same spectrum of resources crucial to both present society and future generations. In this way, the relationship between a property owner and the rest of society

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63. *Id.* at 36–37.

64. *Id.* at 78.

65. GERHART, *supra* note 1, at 72.

66. *Id.* at 298.

67. *Id.* at 297–98.

68. *Id.* at 36.

69. *Id.* at 5.

70. GERHART, *supra* note 1, at 7–8.

71. *Id.* at 9 (Gerhart notes that “if we look at property not as a resource to be assigned but as society’s expression of social values that are important in making the assignment, we begin to see the normative context of the notion of property—its ability to express values and its role as a device for mediating relationships between people,” *Id.* at 9).

72. *Id.* at 78.

regarding how resources are used is more important than a property owner's individualized conception of how the resources on his or her property ought to be used.

Of course, society might pay property owners for the use of natural resources over which the property owner maintains control, and indeed this happens quite often in terms of extractive resources like timber, agricultural products, oil and gas, and so on. Society does not take these resources and simply redistribute them, nor does society force the extraction of those resources from private property against the owner's will. Property owners maintain incentives to cultivate these resources because they can engage in a market—a market that facilitates compensation from society to reward property owners for their productive efforts.<sup>73</sup> Yet sometimes the value society gains out of landed resources is that they *not* be cultivated, commoditized, or otherwise subject to market forces that encourage extraction and sale (especially since such activities can actually lead to environmental harm). In these instances, landowners could still be paid to preserve these positive externalities, and markets are emerging that do just that.<sup>74</sup> But there are many social values that we require individuals to recognize without any form of payment. For these social values we do not pay society to provide a benefit as much as we obligate them to refrain from harming others. Disallowing ownership of people as property, for example, prevents a great number of undeniable harms. Even so, prohibitions on slavery could also be characterized as the provision of a benefit on society, since it supports equality among peoples, reduces wealth disparities, and leads to increased educational opportunities for all. Yet, we do not pay people not to own other people. Future generations are as reliant (if not more reliant) on a well-functioning environment as the current public. Therefore, society maintains a vested interest in responsible land management, and it is unclear why property owners should be paid not to destroy resources on those lands. As Gerhart states,

society must determine, for any given distribution of resources, how the rights and responsibilities of owners and non-owners, now and in the future, ought to be distributed among individuals . . . given the distribution of resources, what is the just or morally right way for individuals to interact with other individuals over claims about resources?<sup>75</sup>

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73. Of course, sometimes property owners may have *too few* rights in resources, which can lead to their destruction and mismanagement by centralized authorities. Our strong property rights system, after all, facilitates a conservation fund's ability to purchase property and leave it in a natural state in perpetuity, for example.

74. Consider water quality trading, endangered species mitigation banks, conservation easements, etc. See Ecosystem Marketplace, <http://www.ecosystemmarketplace.com/>.

75. GERHART, *supra* note 1, at 22.

The goal for a community is to establish rights for property owners constrained by property owner responsibilities to ensure that society “gets the most out of its resources consistent with each individual’s right to equal respect . . . .”<sup>76</sup> Thus, property owners become Gerhart’s “constrained decision-maker.” In other words, we want to allow the extraction of resources on private property, but when it interferes with other property owner and non-owner rights—parties who also rely on those resources due to their common-pool provision of environmental services—then rights to engage in resource appropriation can be constrained.

If we accept that others and society without ownership rights maintain an interest in the natural capital on private land because of its common-pool status, then Gerhart’s theory of property owner as constrained decision-maker becomes more than just a political concept, but rather a legally defensible tenant of property law. A property owner’s legal obligation to be other-regarding is crucial to representing society’s interest in the common-pool. Consider a world of one property owner, but many citizens. It seems fairly uncontroversial that this person would have a moral obligation not to destroy all the natural resources over which she maintains control—perhaps by paving the world’s largest parking lot—not only because it would put her well-being at risk but also the well-being of others in society. When you disaggregate this single property owner’s moral duty into the many property owner interests that exist in reality, we can see that all property owners have a moral obligation not to destroy all natural resources over which they maintain control—and when society’s assignment of that burden of property ownership manifests through positive law, individual property owners’ use of resources may be constrained. Compare this with a view on the opposite end of the spectrum, where property owners have a baseline right to appropriate what they choose to appropriate, even if they owned it all and chose to pave it all over. The moral obligation in this circumstance would be on society to either compensate property owners for the natural capital that they hold hostage or otherwise suffer its destruction. Yet the moral obligation can only flow in one direction here: property owners have a moral obligation to society to manage natural resources in a way that does not harm society, but society does not have a moral obligation to pay for limitations on the rights of property owners to destroy those natural resources. This thought experiment is made concrete in Gerhart’s assertion that:

[e]ach individual . . . ought to take full responsibility for her decisions, while respecting the right of other individuals to express their individuality and will by the decisions they make. Each individual must act as he would if he made decisions that treated other individ-

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76. *Id.* at 19.

uals with equal freedom, allowing each individual to flourish in the way each sees fit. . .giv[ing] content to the principle of equality by relying on the veil of ignorance as a methodology for determining what assignment of burdens and benefits can be called moral.<sup>77</sup>

John Rawls's veil of ignorance, as noted earlier, asks us to consider how we would want society to be governed if we had no way of knowing who we would be in society. Importantly, and as expounded upon in the next Section, Rasband et al. have noted that the veil of ignorance applies temporally to resource management. In the temporal context the question becomes: "How would you want resources managed today if you did not know *when* you would be born?"<sup>78</sup> Clearly individual property owners, each with the right to appropriate natural capital unless paid by the government not to do so, are unable to argue that moral obligation running in that direction would ensure preservation of those resources in the future, not only for the public, but also for individual property owners. This is especially important since common-pool resources shared horizontally through space and across private- and government-owned properties are also shared by resource users through time, as further discussed in the next Section.

#### B. *Spatial and Temporal Commons and Future Generations*

the spatial aspect of neighborliness also has temporal implications . . . . Circumstances change, and with changed circumstances come changing obligations . . . Decisions that are reasonable ex ante may become unreasonable over time . . . .<sup>79</sup>

Ultimately, commons dilemmas arise out of an inability for resource users to coordinate. While we tend to think primarily of commons tragedies arising out of an inability to coordinate through space, it also results from failure to coordinate through time. As a result, some sort of aggregative process is needed to coordinate both spatial and temporal resource use decisions, whether it is private property, government policies, or voluntary contractual arrangements among users of a common-pool.<sup>80</sup> None of these potential solutions are silver bullets, but private property in particular presents a unique set of challenges in resolving commons dilemmas. Gerhart gets to the heart of privatized commons resource theory when he asks: "Ought we to envision property theory to describe a process of aggregating individual interests into a social system, or ought we to understand social interests (the "public good") to be defined independently of individual interests. Is defining the social interest an aggregative process or an inde-

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77. *Id.*

78. Rasband, *supra* note 8, at 20.

79. GERHART, *supra* note 1, at 196–97.

80. Hudson, *supra* note 15, at 1018.

pendent process?”<sup>81</sup> In the natural capital context an independent process is warranted, because an aggregate of individual private property interests would likely be only aggregating individually rational, collectively disastrous decisions.<sup>82</sup> In this way, “the behavior of owners and non-owners that is appropriately other-regarding becomes the device that coordinates resource use between individuals and allows the law simultaneously to advance individual and social interests . . . [by] act[ing] as the ideal, other-regarding decision maker would act.”<sup>83</sup>

Environmental legislation, in particular, Gerhart argues, came about because the private law of property was unable to coordinate user rights in a manner that would avoid the tragedy of the commons.<sup>84</sup> Private property owners compete over resources and development activities that maximize the short-term value of their land, and “when individuals compete, they effectively disregard (or even intend) the negative impact of their decisions on the well-being of others.”<sup>85</sup> This, of course, is the opposite of coordination and cooperation, which individuals engage in “by taking into account the impact of their decisions on others, hoping that the other will do the same.”<sup>86</sup> Indeed, coordination is a basic foundation of common law property, and is why law emerged to avoid the negative consequences of property owner competition (the first and foremost being violence) and to facilitate cooperation (from nuisance law to zoning and other regulatory tools aimed at balancing property owner interests). Yet, even though “our system of private property assumes that decentralized and individual decisions about resources, when coordinated through well-functioning markets, lead to the appropriate outcome for the community,”<sup>87</sup> competition for resource appropriations leaves resources in a tragic plight unless resource users voluntarily curb their rationality or government policy accounts for it. Gerhart states,

The implementation of common belief systems requires that individuals adopt other-regarding decision making, refraining from self-regarding decisions (overexploitation) when their self-interest suggests that a sacrifice of their short-run self-regarding interests will, in cooperation with others, achieve their long-run interests. In this context, individuals are other-regarding when they curtail their use of the commons in order to coordinate with other users to preserve the stock of resources and ensure the long-run health of the commons.<sup>88</sup>

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81. GERHART, *supra* note 1, at 15.

82. HUDSON, *supra* note 5.

83. GERHART, *supra* note 1, at 15.

84. *See id.* at 218–19.

85. *Id.* at 67.

86. *Id.*

87. *Id.* at 283–84.

88. GERHART, *supra* note 1, at 220.

Consider coordination problems through space—that is, how specific resources are managed by current resource users. Gerhart highlights that the owners of subsurface common pool resources like oil, gas, and water share resources uniquely since one owner’s use of the resource necessarily affects others’ use of the resource.<sup>89</sup> Gerhart argues that coordination problems arise for subsurface resources because,

the decisions of surface owners . . . are so interdependent that it is not possible for society to rely on independent but coordinated decisions. Each surface owner’s decisions about where and how to extract resources has a potentially immediate and direct impact on the well-being of other surface owners and on their ability to extract wealth from the common pool. Like co-users of common property, each surface owner has an interest in the pool that cannot be easily separated from the interest of other surface owners.<sup>90</sup>

Yet the same is true for categories of above-surface natural capital that are historically seen as more readily subject to private property rights, like forests, species habitat, or wetlands. While Gerhart criticizes the use of an unchecked private property paradigm for the management of oil, gas, and water, this criticism could apply equally to common pool natural capital at the surface. One private property owner’s use of forests, for example, does not necessarily reduce forest resources on another’s land, but does harm the broader public when a number of similar private appropriations are aggregated. In short, spatial coordination problems across private properties are commons problems.

Spatial commons problems are only exacerbated by temporal coordination problems. Gerhart argues that sequential owners are “common owners (over time rather than during a period of time), and it would not surprise us that common owners have obligations to one another that are forged from their recognition of their common ownership.”<sup>91</sup> Gerhart delves into specific examples of temporal coordination problems by focusing on very tangible, well-established property concepts like the doctrines of waste, destruction, and restraints on alienation under trusts and estate law. Each of these doctrines is aimed at resolving potential conflicts between present and future owners. The doctrine of waste, for example, stands for the proposition that a current owner owes duties to future owners “by virtue of their sequential relationship,” which “requires each owner/possessor who gets the present benefits of the property to also accept the burdens of saving appropriate benefits for future owners.”<sup>92</sup>

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89. *Id.* at 222.

90. *Id.* at 223.

91. *Id.* at 232–33.

92. *Id.* at 59.

Gerhart's approach to temporal coordination may be characterized as conservative in that he does not stray too far from legal doctrines that, while aimed at temporal considerations, insist on identifiable successors in interest who would be affected by resource decisions. Yet the tenor of his arguments regarding each are no less tangible when weighing obligations that arise regarding the appropriation of natural capital and the ability of legislatures to restrict that appropriation when it would be in the best interests of unidentifiable (in a legal sense) future generations. In other words, in the context of the doctrine of waste, destruction, or restraints on alienation, Gerhart is obviously talking about specific property arrangements involving identifiable parties, rather than temporal considerations writ large. Yet, the role of public law in reigning in the development of property today so that resources can be available for future generations is often overlooked when deciding what burdens a property owner should bear. In this way, as with the doctrines of waste, destruction, or restraints on alienation, "the appropriate division of decision-making responsibility over time occurs when a present owner is required to take into account the well-being of future owners . . . ."<sup>93</sup>

Consider the doctrine of destruction. Historically an owner had a right to destroy her property. Yet, the law is increasingly limiting this right, "and the many instances in which legislative regulation intervenes to require preservation [ ] recognize[s] those instances in which the owner of property does not bear the relevant social costs of destruction."<sup>94</sup> This is the justification for cultural or historical preservation, for example, or laws against the dumping of hazardous waste and the preservation of habitat.<sup>95</sup> Though destruction of property as a legal doctrine deals with a property right outside the core of the property rights bundle, it is nonetheless on the spectrum of property rights that facilitate the removal of resources of value to society at large. Why should we be moving towards a concept of property whereby a government can disallow a property owner from tearing down (under the doctrine of destruction) a perfectly good, albeit historical, house if she wishes, but not disallow her from paving her 100 acres of (entirely) coastal wetlands out of concern that it will owe just compensation? In many ways the latter resources may be of more importance to society than historical structures.

Other fundamental property doctrines, even those dealing primarily with spatial coordination, tell us something about the temporal nature of managing resources and private law's inadequacies in doing so. Gerhart discusses trespass as being a prime example whereby owners generally have a stringently protected right to exclude, but the right is limited in circumstances where property owners "sometimes have ob-

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93. *Id.* at 227.

94. *Id.* at 237.

95. *Id.*



ligations to be appropriately other-regarding concerning the well-being of potential users of property . . . .”<sup>96</sup> This is the case, as in *State v. Shack*, for medical workers gaining access to a farm to help migrant workers.<sup>97</sup> Might the underlying logic also be applicable in the context of appropriate limits on the ability of current property owners to exclude future owners from accessing resources on the property, if those resources are deemed essential enough for society to protect through positive law?

Clearly, waste, destruction, restraints on alienation, and trespass are legal doctrines based upon property relationships and contractual arrangements between identifiable parties, which is of course different conceptually from general duties of resource management owed to speculative future property owners. Yet, the latter lies along the spectrum of just the type of social obligation at which doctrines like waste and destruction are aimed. After all, regarding these doctrines “the law asks which individual can avoid the harm at least cost.”<sup>98</sup> Future generations have no ability to avoid costs associated with how resources are managed today; current property owners do.

Given that spatial and temporal natural capital commons remain even in the presence of private property, and archaic private law principles are inadequate to address their management, how might public law step in based upon Gerhart’s theory? Gerhart, after all, posits that “moral rights, perhaps because they are given so little respect in the United States, are rarely discussed with other issues of temporal coordination.”<sup>99</sup> Even so, since the purpose of the law is to allocate decision-making responsibility for resources through time, Gerhart argues that property theory should address “the relationship between sequential owners that understands the role of the market in protecting owner autonomy over time and that situates the role of the law in intervening when the market cannot play its coordinating role.”<sup>100</sup> In doing so, Gerhart discusses the many ways in which private law is “inadequate to successfully coordinate decisions over time, which provides a justification for legislative intervention as a response to the deficiencies of private law and the market.”<sup>101</sup>

Conventional property theory maintains that a property owner has no general obligations to future owners if there is no identifiable future owner who would have standing at private law to enforce a right against a present owner.<sup>102</sup> Gerhart posits that it is unclear why an owner should not be accountable to even *unidentified* future owners

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96. GERHART, *supra* note 1, at 57.

97. *See State v. Shack*, 277 A.2d 369 (N.J. 1971).

98. GERHART, *supra* note 1, at 200.

99. *Id.* at 228.

100. GERHART, *supra* note 1, at 229–30.

101. *Id.* at 230.

102. *Id.*

for the damage the owner does to their potential property interests, and “we rarely ask why the owner is given dominion to do acts that damage the future value of the property.”<sup>103</sup> Gerhart argues that viewing the market as serving as an adequate proxy for the interests of future owners perhaps clouds our judgment here. Indeed, the market can actually increase value short term from development activities, while decreasing it even further in the future because of an aggregated loss of natural capital. Gerhart acknowledges that the market provides some management benefits, but it also presents major weaknesses—primarily that information and externality problems arise. The law intercedes to “police those requirements.”<sup>104</sup> Citing Judge Posner in the context of the waste doctrine, “the goal of legal intervention is to maximize the long-run value of property . . . .”<sup>105</sup> As detailed further in the next Section, without positive law, the long-run value of much property in the United States is lessened. Therefore, a theory of market failure justifies intervention of positive law when “the market is unable to fulfill its function as a stand-in for future owners because an owner can escape the consequences of her decisions.”<sup>106</sup>

The difficulty in analyzing present owner decisions versus future generation interests, of course, is that future owners may very well prefer developed property over natural capital.<sup>107</sup> As Gerhart notes in the context of waste, “one owner likes income from timber and the next owner likes forests.”<sup>108</sup> But it is not only future owners of specific parcels of property that must be treated in an “other-regarding” manner by present owners. Society at large, including other private property owners in the region, would also be harmed from aggregated impacts of natural capital appropriation. Gerhart acknowledges that the solution to this problem is recognizing that:

decision making is interdependent, which implies that each owner ought to take into account the well-being of subsequent owners . . . [a] decision about the use of the property becomes unreasonable if, given the state of knowledge that a reasonable owner ought to have, the owner fails to consider appropriately the well-being of subsequent owners.<sup>109</sup>

In modern times, any reasonably situated property owner maintains access to scientifically-based information about the dangers of unchecked, aggregated natural capital appropriation. Positive law be-

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103. *Id.*

104. *Id.* at 232.

105. GERHART, *supra* note 1, at 234.

106. *Id.* at 232.

107. Though certainly there are gradations of policy options in between all out preservation and all out development, such as developments that better integrate and preserve natural capital within them.

108. GERHART, *supra* note 1, at 235.

109. *Id.* at 235.

comes essential to manifest the interests of future generations in curbing that appropriation, because as Gerhart notes:

Individuals care about how land use decisions affect other individuals and the community of individuals, both present and future; they care about the future of their environment and the sustainability of the ecological system. Without legislative regulation, those interests would not be accounted for by the legal system . . . wetlands preservation laws, for example, involve a conflict between present and future generations and an intra-generational conflict between those who find preservation to be worthwhile and those who do not. Because trees, endangered species, and future generations do not have standing, those with an interest in trees, endangered species, and future generations can use the legislative outlet to express their interests. The resolution of disputes over these kinds of interests requires consideration of both the harm to the owners and the benefits to a widely diffuse and heterogeneous population (over time) and are best dealt with in the aggregation process that only legislative regulation can provide.<sup>110</sup>

The next Section discusses the role of public law in addressing the spatial and temporal coordination problems created by the management of privatized commons resources.

### C. *The Role of Public Law*

[P]roperty rights arise, and are worthy of moral respect, because they follow terms under which the community recognizes claims over resources.<sup>111</sup>

Gerhart's theory of property law provides a framework for the argument that private property owners maintain a legal obligation, as represented by society's values, to manage natural capital in a way that is other-regarding toward the public. Under Gerhart's concept of duty the community must give form to the other-regarding decisions private property owners must make regarding the management of resources over which they maintain control.<sup>112</sup> Contrary to Gerhart's theory, other theories of property seem to presume private property owners have a recognized legal right to appropriate natural capital virtually at will, even to the point that if owners do not engage in resource consumption their property right might be revoked. The labor theory of property, for example, supports ownership rights for those who cultivate land (recall homesteading acts) and even justifies taking away a property interest if an owner does not utilize resources (such as prior appropriation property regimes for water in the west or adverse possession laws).

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110. *Id.* at 297–98.

111. *Id.* at 48.

112. *Id.* at 54.

There are many positive laws that seek to constrain property owners and arguably call upon property owners' legal obligations per Gerhart's theory, as is the case with the federal Endangered Species Act and other statutes. These laws, however, face an uphill battle against many property owners' and commentators' view that the baseline right is one of appropriation unconstrained by duty and therefore the presence of constraints requires compensation. In other words, positive public law that would otherwise constrain private property owners from behaving with a rational, commons herder mentality and thereby enforce their moral duty to manage natural capital in an "other-regarding" way toward the public may be hindered by constitutional interpretation—and primarily interpretations of the Fifth Amendment Takings Clause.

Let us step back for a moment and recall that the genesis for public controls on natural resource management was predominantly private law. The types of conflicts that gave rise to nuisance claims adjudicated through the court system, for example, later became preemptively addressed through zoning law. Zoning law, in turn, was shaped by the body of decisions adjudicating private nuisances. Private law was the first form of constraint on private landowner activity when appropriating resources. Gerhart describes nuisance law as allowing owners to make decisions about the use of their property, but these decisions "are constrained by the obligation of each owner to think reasonably about how his or her decisions might affect other owners (private nuisance) and non-owners (public nuisance)."<sup>113</sup> Stated differently, "the law's function in nuisance cases is to assess the decisions made by each neighbor in light of what each neighbor should have understood about the decisions (past, present, and future) of other neighbors (assuming that the other neighbors will make reasonable decisions)."<sup>114</sup>

Gerhart notes, however, that private law was insufficient to address a number of resource management issues. Gerhart argues that a plaintiff can claim that "he should not have been denied access to the defendant's property, or that the defendant should not be emitting dangerous smoke from her factory, but the plaintiff may not claim that the defendant's decision to kill endangered species or fill in valuable wetlands was a wrong as to him."<sup>115</sup> As a result, Gerhart says the role of public law is to protect a "broader range of interests that the owner must take into account—interests of the community that are not, by themselves, the source of an individual wrong."<sup>116</sup> Indeed, public law is a manifestation of collective interests that correspond with society's interest in privatized commons resources, whereas nui-

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113. *Id.* at 16.

114. GERHART, *supra* note 1, at 192.

115. *Id.* at 72.

116. *Id.*

sance reflects an ad hoc resolution of individual conflicts over isolated and segmented resource units of natural capital. Ultimately, one of public law's functions is to allow the government "to mediate between the private interest and the interests of the community as a whole in ways that private law cannot mediate, so that owners, when they make decisions, take a wider range of values into account, including values that are held collectively rather than individually."<sup>117</sup>

Public law is also superior to private law in many cases because it is proactive (zoning) whereas private law is reactive (nuisance).<sup>118</sup> Proactivity can avoid environmental problems that would otherwise be costly to ameliorate after the fact. Land use law and zoning, in particular, "allow[ ] the legislature to make sure that each owner's decisions take into account a broader range of factors and appropriately reflect social interests that private law cannot address."<sup>119</sup> Not only is legislation meant to represent a broader range of interests, but it also represents interests over "a wider time horizon, to account for a community's heterogeneity of interests."<sup>120</sup> This is how the legislature through positive law (such as land use regulation) "arrang[es] the rights and responsibilities of owners and non-owners with respect to resources."<sup>121</sup>

The authority of the legislature to engage in these activities arises from the police power, (protection of the public health, safety and welfare), while the Takings Clause is the limitation on such authority (in addition to a variety of due process considerations regarding land use and related procedures based upon the Equal Protection Clause and Due Process Clause).<sup>122</sup> Gerhart states that both the police power and the Takings Clause "reflect the social recognition concept by giving the legislature the authority to rearrange the terms of the preexisting arrangement of property rights and responsibilities, changing owners, or expanding or contracting the rights and responsibilities of owners and non-owners established through private law and private arrangements."<sup>123</sup> In this way, Gerhart's social recognition concept does not see property rights emanating from or recognized by the government as if the government were a separate entity. Rather, the government is a manifestation of the community and its norms,<sup>124</sup> and "[w]hen courts and legislatures determine the rights and responsibilities of individuals over resources, they take part in an interactive social conversation about how decisions over resources ought to be

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117. *Id.* at 17.

118. *Id.* at 296.

119. GERHART, *supra* note 1, at 247.

120. *Id.* at 292.

121. *Id.* at 25.

122. *Id.* at 302.

123. *Id.* at 250.

124. GERHART, *supra* note 1, at 252.

made.”<sup>125</sup> These conversations often involve, of course, the provision of public goods like environmental preservation.<sup>126</sup> In this way:

the community, acting through its political processes, makes claims on owners to adjust the rights and obligation in order to take into account the values that are not appropriately accounted for in private law settings. Here community values . . . preservation of a wetland, for example . . . influence the shape of property law by aggregating the burdens and benefits of ownership through the legislative process.<sup>127</sup>

To summarize, Gerhart theorizes that public law is superior to private law in the management of many resources and that public law is the manifestation of society’s allocation of the burdens of property ownership and of the moral duty of property owners to be other-regarding. If so, then what is the primary roadblock to the utilization of public law to protect society’s interest in natural capital resources? It ultimately comes down to the conflation of a property owner’s right to use property with their right to exclude others from property. Due to this conflation there are circumstances under which governments have been unable to legislate for the protection of resources because it resulted in the finding of a “taking” under the Fifth Amendment of the United States Constitution (and the government either could not afford or was unwilling to provide such compensation).<sup>128</sup> And yet, these regulations merely restricted use, not a property owner’s right to exclude. As Gerhart argues, “[t]here is a fundamental difference between government action that impairs the right to exclude (which eminent domain protects) and government action that impairs the right to use property . . . .”<sup>129</sup> The doctrine of regulatory takings, Gerhart argues, “wrongfully equates the government’s obligation to compensate owners for nullifying the right to exclude with limitations on state regulation of the right to use property.”<sup>130</sup> Gerhart is critical of the unintelligible principals which undergird the regulatory takings doctrine, and argues that even restrictions on land use that severely reduce the value of property are not takings requiring just compensation as long as they do not interfere with the right to exclude.<sup>131</sup>

While scholars and judges often assert that regulation goes “too far” when it becomes the functional equivalent of a physical invasion, this analysis is unhelpful in determining whether a taking has actually occurred or not.<sup>132</sup> Gerhart argues that it is not some amorphous functional physical invasion that results in a taking, but rather the

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125. *Id.*

126. *Id.*

127. *Id.* at 36.

128. *See, e.g., Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992).

129. GERHART, *supra* note 1, at 256.

130. *Id.* at 257.

131. *Id.* at 256.

132. *Id.* at 262.

restriction on the right to exclude,<sup>133</sup> and that “the oft-repeated statements that regulating land use can be the functional equivalent of a taking are simply wrong.”<sup>134</sup>

The primary flaw in the regulatory takings doctrine according to Gerhart is that it “suggests that the state’s role is to relieve owners of some of their burdens of ownership rather than to identify the burdens that are appropriately imposed to deliver public goods.”<sup>135</sup> Most often, private landowner choices or natural forces are to blame for the circumstances that make regulation of resource appropriation activities necessary,<sup>136</sup> and as a result, “[g]overnment ought not be required by the Constitution to act as a guarantor against such losses.”<sup>137</sup> Gerhart posits that property ownership places the burden on owners to adjust to changing circumstances that affect value, “including changing social perceptions about the value of resources in various contexts.”<sup>138</sup> Owners are particularly suited to bear this burden since investment-backed expectations include an understanding that property may be subject to future regulation.

Gerhart’s theory of moral obligation mediates a “muddled” regulatory takings doctrine,<sup>139</sup> about which Gerhart forcefully declares: “never have so many able minds tried so hard, with so little success, to provide content to an idea that, when properly understood, is vacuous.”<sup>140</sup> Even in the extreme (though undoubtedly rare) circumstance whereby a property owner is completely prohibited from appropriating any natural capital on his property,<sup>141</sup> positive public law represents the values society places on those resources and evinces a manifestation of the moral right the public maintains in the services provided by them. The countervailing moral duty a property owner has to protect those resources, in turn, extends to both the present and future public’s interest in maintaining a healthy environment across

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133. *Id.*

134. *Id.* at 265.

135. GERHART, *supra* note 1, at 267.

136. *See* Miller v. Schoene, 276 U.S. 272, 277 (1928); Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1024 (1992).

137. GERHART, *supra* note 1, at 269.

138. *Id.*

139. *Id.* at 268; *see also id.* at 13 (“[M]oreover, if the only constraint on state regulation is to say that it cannot “go too far,” what baseline are we measuring the deviation when determining how far the regulation has gone? The theory in this book develops a concept of property that understands the Constitution to both authorize and limit state regulation of property on the basis of a core concept of property, a concept that allows us to chart the border between state power and its limitations. . . [I] suggest an approach to property law that unifies ideas concerning the disparate interests of owners and non-owners into a framework that shows how each individual is charged with responsibility to account for the interests of others in a morally appropriate way. . . each person in a property relationship must make context-appropriate decisions that are grounded on values that are themselves morally justified.”).

140. *Id.* at 259.

141. *See* Lucas v. S.C. Coastal Council, 505 U.S. 1003 (1992).

the aggregated private properties within governmental jurisdictions. Property owners still, after all, maintain many other sticks in the bundle of rights, including the right to exclude, the right to transfer, and even the right to use the property, though not in a way that requires complete appropriation of the natural capital. Indeed, “use restrictions impair the marketability of the property for the forbidden uses, but that does not keep the market from performing its coordination function; the market continues to coordinate uses among owners for the non-forbidden uses.”<sup>142</sup> As a result, legislatures regulate land use not because “markets are unable to perform their coordinating function; it is that individual owners do not account for all the information that is relevant to the social value of the property.”<sup>143</sup> Gerhart’s book makes this understanding of rights and obligations explicit in his theorization of the relationship between private property owner and the government as representative of the public interest. In this way, government regulation becomes the mechanism for coordinating what might otherwise be rational, self-regarding behavior on the part of private property owners appropriating natural resources from the “commons” that is the environment. As the next section demonstrates, traditional law and economics analysis does not account for the interconnectedness of individual private properties in constituting the ecosystems making up the “environment,” and therefore ignores the “other-regarding” duty of private property owners to manage resources in a way that does not cause harm to society in the aggregate.

#### D. *Deficiencies in Traditional Law and Economic Analysis*

Viewing ownership as control and connection rather than the right to market gains and losses shifts our focus from property as the holder of value to property as the reflection of things individuals value.<sup>144</sup>

The growth of law and economics analysis in recent decades provides an important lens through which to understand resource management. But law and economics is, after all, only a lens. While traditional law and economics analysis helps us overcome conventional policy wisdom through the cultivation of more rigorous empirical data on a wide range of issues, it remains only one tool for understanding resource management issues. And it does not have all the answers.

Gerhart distinguishes his theory from law and economics analysis, even though the latter also “understand[s] property law to function to maximize individual well-being.”<sup>145</sup> But unlike traditional economic

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142. GERHART, *supra* note 1, at 265.

143. *Id.*

144. GERHART, *supra* note 1, at 313.

145. *Id.* at 6.



analysis, Gerhart's theory "does not assume that the maximizing process is either value-free or self-defining. Instead, the theory faces directly, as many economic theories do not, the question of whose well-being matters and how we determine whose well-being must be sacrificed so that another's well-being may increase."<sup>146</sup>

More pointedly, Gerhart argues that:

the economic view cannot prevail because the methods of valuation that economists have suggested are morally deficient, a point made by many. Valuing two people's well-being on the basis of revealed preferences, or by imagining hypothetical preferences that would prevail if wealth were equally distributed, misses the point that interpersonal comparisons ought to be made using social values developed through social interaction, not personal valuations . . . What matters is the values people ought to use to shape their decisions, not how much they would pay to avoid the cost in question.<sup>147</sup>

While corrective justice theories "imply[ ] that wealth maximization does not mean maximizing each individual's self-regarding interest,"<sup>148</sup> law and economics utilizes self-regarding interest to create "a goal-oriented view of law" where welfare maximization is the law's goal.<sup>149</sup> Maximizing each individual's self-regarding interest, in turn, becomes the foundation for a view that a property owner has a virtually unrestricted right to appropriate natural capital. It follows under this view that prohibitions on appropriation should be compensated by society through the government.

As indicated earlier, privatized commons resource theory may be subject to criticism under traditional law and economics analysis, which conceives of a legal right to exclude others not only from one's property but, more importantly, from decisions regarding the appropriation (or consumption) of natural capital on one's property. If society has no rights that it can enforce against a property owner, law and economics analysis would say that natural resources on private property are no longer in a commons condition. To the contrary, law and economics conceives of traditional common-pool resources as creating management problems because each herder is being harmed by another who has no legal rights or obligations. With no one having legal rights or obligations, no one herder can leverage invested assets to avoid tragedy. These analysts would argue that private property owners, on the other hand, do have rights in resources that they can exercise and leverage however they wish, for good or ill—the right to destroy resources or the right to protect them. Law and economics critics might argue that property owner A has a legal right to appropriate natural capital and if other private property owners want to

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146. *Id.*

147. *Id.* at 29.

148. GERHART, *supra* note 1, at 18.

149. *Id.*

prevent said appropriation they can leverage their own rights to avoid “tragedy,” perhaps through negotiating with property owner A an amount of compensation that would make it worthwhile for owner A to leave the natural capital in place. This criticism assumes, however, that property owner A has a baseline property right of appropriation, unconstrained by obligation or duty. Therefore, property owner A is under no legal duty to appropriate natural capital in a way that avoids causing harm to the public, or perhaps not to appropriate natural capital at all because it will harm the public’s rights in those resources.

Under a privatized commons resource conception of natural resources within Gerhart’s theoretical framework of property, however, the moral obligation of a would be appropriator of natural capital is brought to bear by the leveraging of the moral rights of other property owners and non-owners to have those resources managed sustainably, even though other property owners have no property right in the land itself. In this way, the moral obligation for the management of natural capital runs one direction, such that regulation reflecting society’s values and interests in natural resources can create more stringent restrictions on natural capital use (as long as not running afoul of confiscating the actual land); but it cannot undo a property owner’s right to protect natural capital more stringently than would the government or other property owners.

As a private property owner, I may not have a right to walk on a neighbor’s land, camp on it, or take it from her. But I do have a morally justified right in the carbon sequestration values of the trees on her property; the riparian buffer zone water quality protections provided by those trees; the biodiversity protection the habitat on her property provides, for wildlife that may very well come onto my property; the cancer medicine that may be derived from species on her property and used to treat my current family or descendants; and the flood retention value provided by wetlands on her property. The moral rights I have in those resources and services give rise, in turn, to moral obligations on her part not to consume those resources in a way that harms me, other property owners, and future generations of rights holders who will depend on the values and services generated by that natural capital. It may very well be that while her individual appropriation of such resources, even if permanent, would have little effect in isolation—which, unlike nuisance law, renders the moral violation hardly noticeable—the aggregated effect of all private property owners doing the same would cause harm to society at large, now and in the future. In this way the situation is no different than Hardin’s herders, and legal obligations driven by moral imperative give a government the right to restrict those property rights without compensation—as long as it does not overstep and limit ownership, occupation, or other clearly sacred indicia of property rights.

While labeling natural resources on private land commons resources may be novel and may fly in the face of traditional law and economics principles, the sentiment underpinning that notion is not. The public and wildlife trust doctrines, for example, recognize the public's interest in certain resources that cannot be subject to forms of privatization that harm the public's interest in those resources. And yet, battles over the scope of the doctrines indicate that they may not take the theory underpinning them far enough (are the doctrines limited to submerged lands under navigable waters and wildlife? If not, what reasonable checks can be placed on their use?<sup>150</sup>). Indeed, other common law constraints on private property rights are often aimed at remedying economic harms or maximizing economic efficiency. Such is the case with nuisance law, which may be used to protect environmental resources, but often focuses on economic or health impacts. These common law principles, in turn, are often codified by positive law—nuisance law in the form of zoning, for example, which often seeks to protect economic resources by placing industry away from residential property so as not to reduce its value or threaten it with fire, though zoning may also be used to protect environmental values.

General positive law-making authority at the state level is a manifestation of the police power, and at the federal level a manifestation of the Commerce Clause power. Whether common law arising out of public trust or police power principles (nuisance) or positive legislation at the local, state, or federal levels, governments have historically been tasked with balancing the public's interest in common-pool natural resources spread across private and public properties. A traditional law and economics critique that denies property owner obligations regarding the management of those resources, and simultaneously places a duty on the part of the public to compensate for constraints on that management, flies in the face of many long-standing legal doctrines.

#### IV. CONCLUSION

While Gerhart's book will no doubt be a source of rigorous debate in some quarters of property theory, I am hopeful that my review demonstrates an application of his theory in practice. I believe his book will have an immediate impact not only on property law, but on the related fields of land use regulation and environmental and natural resources law and policy. Gerhart's work takes privatized commons resource theory beyond a normative claim for policy-making or a tool for ad hoc jurisprudence in courts and places the concept within a holistic theory of property, which sheds light on how disputes over the regulation of natural capital on private land should be resolved.

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150. See Blake Hudson, *The American Takings Revolution and Public Trust Preservation: A Tale of Two Blackstones*, 5 SEA GRANT L. AND POL'Y J. 57 (2013).

Although property owners maintain a legal right to exclude others from their land, they maintain a legal, morally based obligation regarding the natural capital on that property—an obligation, which extends to the present and future public’s interest in maintaining a healthy environment across the aggregated private properties within governmental jurisdictions. This obligation, therefore, removes any legal right a property owner maintains to require just compensation for government regulation when appropriation of that natural capital would harm the public at large (even if that harm is the result of seemingly small harms aggregated over time). Gerhart’s book makes this understanding of rights and obligations explicit in his theorization of the relationship between a private property owner and the government as representative of the public interest.

Ultimately, Gerhart’s theory in combination with privatized commons resource theory makes clear that when private property owners maintain obligations to look out for the well-being of other individuals in their management of natural capital, limitations on their property rights in natural capital are validated by the property rights regime, rather than being undermined by it—as would be the case if just compensation were required for such limitations. It is true that “[t]he law imposes no freestanding obligation to benefit fellow citizens.”<sup>151</sup> Yet, that is different from a freestanding duty not to harm broader society. Gerhart expresses this sentiment best:

[W]hen an individual is attached in an appropriate way to the risk of loss another faces, the individual must, when making choices, give appropriate significance to the harm another might incur. This is because it is the individual’s own choice that leads the individual to be attached to the risk of harm another might face, and the other is entitled to be free from the avoidable consequences of that choice.<sup>152</sup>

The resources shared across private properties are common-pool, a fact that is scientifically undeniable even if legally unrecognized at present. Positive environmental law allows society to better attach the risk of loss property owners face with the harm that society might incur when private property owners manage (or mismanage) resources. Without such constraints, we risk validating property regimes that put society’s long-term well-being at risk, rather than ones that facilitate that well-being. Destruction of common pool natural capital crucial to societal well-being is an avoidable consequence, and property owners are best situated to avoid that consequence. Other property owners and the public at large should be free from those consequences to the greatest degree possible.

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151. GERHART, *supra* note 1, at 116.

152. *Id.* at 119–20.