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NEWS & ANALYSIS

Private Land Made (Too) Simple

by Eric T. Freyfogle

In a recent article in the *Yale Law Journal*, Profs. Thomas W. Merrill and Henry E. Smith express concerns about what they take to be the excessive abstraction of law-and-economics writing on private property.¹ This scholarly discourse, they tell us, seems to have forgotten that property law has to do with things. It has become too focused on property as a bundle of legal entitlements and liabilities, overlooking the underlying *res* that a person might actually own. In the case of land, scholars have forgotten that property law deals with the hypothetical Blackacre or Greenacre, rights to which might and do differ from typical contract rights because of the actual, physical nature of land. Professors Merrill and Smith admonish their colleagues to recover this lost wisdom. Doing so, they claim, would improve the ongoing economic discourse: it would help explain why certain elements of property law are as they are, and it would aid ongoing discussions about theoretical issues that economists find intriguing.

As a property scholar who has long tracked this economic discourse from the sidelines, I find myself heartened by the question that Professors Merrill and Smith pose: what has happened to property in law and economics? And I am heartened even more that such prominent insiders would be the ones to raise the question. What, indeed, has happened to property at the hands of such economic scholars, particularly to privately owned land?

Professors Merrill and Smith are right, I believe, in worrying that law-and-economics writing has become too abstract. But in analyzing the issue and in their proposed cure for it they have hardly begun to delve into the problem, which extends deeper than a faded memory of Greenacre. Greenacre, after all, is itself a fanciful place, a place that one creates rather than studies. Like other fictional realms, it includes only those features and elements that its creator finds useful. Greenacre and places like it are easily detached from surrounding lands, from surrounding human communities, and from the complexities and mysteries of the natural world. Activities on it can take place with few or no effects that spill across property boundaries. Life can flourish without regard for actions that occur on other lands. As for Greenacre's owner, she too can become a fictional creation, as simple or as complex as one might want. She, too, is easily shaped to support whatever lesson or tale a creator desires to recount. To regain Greenacre, then—to regain the thingness of land in an abstract way, as Professors Merrill and Smith propose—is not to reattach economic scholarship to real places and real people. It is merely to begin the long journey.

I address the topic of private land as one who has concerned himself for years with the ways people embed themselves into natural orders. I have been fascinated, endlessly, by such questions as how people see land and conceive their relation to it; how they value natural systems; and why they use land as they do. As are many others who have explored such questions, I am dismayed by ongoing derangements of land as a complex, fertile community of life—by the nagging reality, that is, of environmental degradation. The overall problem is grave and vast, particularly when viewed in the long term and with due regard for fundamental ecological processes. One can assess this degradation accurately only by attending closely to the land's many subtle signs of sickness and by drawing upon the works of scientists and others who have studied ecological communities with care. To understand why people use land as they do, additional study is needed, into the historical and cultural roots of land use practices and into the complex array of factors that press upon landowners. Then there is yet further study needed before one can pass normative judgment on current practices. How should people fit into the larger scheme of nature, ecologically, ethically, and prudentially? In what ways are current practices deficient, and how might they be improved? The questions are complex; the answers no less so.

It is from this perspective that I view with concern the growth and trajectory of law-and-economics writing on private land. The writing has reached the point, I believe, where in its distilled, popular forms it is not just deficient but, on balance, harmful. The jettisoning of Greenacre, lamented by Professors Merrill and Smith, merely highlights the many respects in which law-and-economics scholars have retreated into simplified worlds of their own creating. It is a serious development, with troubling, real-life consequences. Reviving the *res*—the thingness of private property—would be a useful move. But it is only a first step in developing sound links between the world as portrayed in neo-classical economic models and the world in which people actually live, embedded in natural and cultural orders, guided by shifting values, traditions, and hopes, and anxious about families, neighborhoods, communities, and the land itself.

Property scholarship has long resided in the real world and engaged with the world's endless complexities and uncertainties.² It has done so, that is, until recent times, until the coming of economic theorists, who have undertaken to study problems and draw conclusions while dwelling almost entirely in abstract, self-constructed realms.

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1. Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 *YALE L.J.* 357 (2001).

2. A good point of entry into contemporary writing on property is Craig A. Arnold, *The Reconstitution of Property: Property as a Web of Interests*, 26 *HARV. ENVTL. L. REV.* 281 (2002) (a thoughtful piece that supplies, inter alia, the history and larger context for the now decades-long argument in law and philosophy about the value of considering property rights in terms of the specific thing that is owned).

If the intellectual simplifications of economics were chiefly a housekeeping matter, intended to keep scholars from being overwhelmed by details, the situation would not be so troubling. But the simplifications of economists have hardly been that. Economic models of private land are highly value laden. Intentionally or otherwise, they display an individualistic if not libertarian political perspective; they ignore and hence devalue ecological connections; and they embrace a presentist, anthropocentric moral scheme that rejects, ab initio, the ethical claims of future generations and nonhuman life. By no means are economic models neutral constructs. Accentuating these political and cultural biases is the profound disconnection between most law-and-economics writing and the vast writing on land by students from other perspectives, including writing in the biological sciences, environmental history, and environmental philosophy. To the typical economist studying land, such writing by all appearances is irrelevant: the questions asked are unimportant; the conclusions drawn are easily ignored, even conclusions that challenge key assumptions that economists employ. This disconnection is no less troubling than the abstraction to which Professors Merrill and Smith modestly demur.

To move from the realm of simple economic models into the world of real land and real people is to see land degradation as a complex cultural phenomenon.³ The land declines because of the ways people use it, and people use as it they do for many nuanced, intertwined reasons. Some of these reasons are usefully portrayed with economic models, but others have more to do with perceptions, values, social relations, and institutional structures. Too often, law-and-economics writing on land is inattentive to these vital, noneconomic considerations. Indeed, in its inattentiveness it embraces, and thus lends credence to, perceptions and value schemes that historians have catalogued as significant causes of land degradation.

Section I outlines my concerns in the form of 21 paragraphs that compare the world as it appears in law-and-economics scholarship with the world that includes real land, in all its complexity, mystery, and moral ambiguity. To make clear the vital contrasts, I portray the world of economic theory in unalloyed forms.⁴ Section II presents my own ideas about landed property rights by way of illustrating one way that such rights might be connected better to real natural communities and to a much wider array of writing on nature

3. By highlighting cultural origins I do not mean to discount technological change, population growth, or the rise of a fossil-fuel economy as important, contributing causes of land degradation. I am persuaded, though, by Donald Worster and other historians that cultural factors broadly defined have been of greater importance overall. *E.g.*, DONALD WORSTER, *THE WEALTH OF NATURE: ENVIRONMENTAL HISTORY AND THE ECOLOGICAL IMAGINATION* (1993).

4. By using this article by Professors Merrill and Smith as my point of departure I do not mean to offer it (or any work by these scholars) as a full example of the economic world view that I here criticize; I am drawn to their article by the question that they ask. I would emphasize, too, that my contrast necessarily simplifies a complex literature, and does so, not by aiming at its middle, but by going after what might be termed its most hegemonic claims: its strands that aim to displace, insofar as possible, competing scholarly understandings of land and how humans ought to perceive it and live on it. Though most scholars will dissent from parts of this distilled economic perspective—and some from many parts—it is usefully presented with clarity, I believe, so that its flaws might be fully explored, not the least because the simple, distilled ideas are the ones that have so captured nonacademic audiences and that account for much of its influence.

and culture. The final section offers scattered observations on narrowly economic approaches to land. I conclude by encouraging scholars to consider as their paradigm environmental examples, not simple cases of smoking factories and wandering rabbits, but something far more complex: for instance, the mussels that are dying in nearly every Illinois waterway, including waterways where all land is private, where landowners are free to negotiate, and where the economist's much-loved market is almost wholly in charge. To trace such problems to their root causes is to see why now-popular economic modes of perceiving private land have so powerfully abetted the land's decline.⁵

"To those who know the speech of hills and rivers," conservation giant Aldo Leopold would write in 1935, "straightening a stream is like shipping vagrants—a very successful method of passing trouble from one place to the next. It solves nothing in any collective sense."⁶ Too few scholars today, economists included, seem to know the speech that Leopold deemed so essential to a clear understanding of private land and land ownership.

Our scholarship would improve if we learned it.

I. Alternative Worlds

1. In the Real World where people live and law operates, nature is highly complex, with land parcels differing widely in their physical attributes and their resident biotic communities.⁷ There are no places called Greenacre or Blackacre, such as exist in purely abstract and theoretical realms—that is, in Theory World. In the Real World, land parcels are ecologically interconnected and the mere division of landscapes into private parcels or political jurisdictions does nothing to sever these connections. In Theory World as commonly created, land parcels are largely discrete. There,

5. My sense, as I have argued elsewhere, is that much legal writing today about humans and land is insufficiently attentive to foundational issues, which are the points on which scholarship today chiefly divides. To overlook them is to breed confusion and miscommunication. Eric T. Freyfogle, *Five Paths of Environmental Scholarship*, 2000 U. ILL. L. REV. 115.

6. Aldo Leopold, *Coon Valley*, in Susan Flader & J. Baird Callicott, *THE RIVER OF THE MOTHER OF GOD AND OTHER ESSAYS BY ALDO LEOPOLD* 218, 223 (1991) (1935) [hereinafter *RIVER OF THE MOTHER OF GOD*].

7. By speaking of the "Real World" I do not mean to deny the role of humans and human culture in contributing to the understandings of the natural world. My aim is to highlight the enormous difference between the work of scientists, who attend to nature's details and who attempt to describe it as fully and accurately as possible, and economists, who when writing about land often content themselves with highly simplified models that make no pretense of drawing upon more than a tiny proportion of nature's details, if indeed they bear any resemblance at all to real places inhabited by real people. The work of scientists can be repeated by others and, when appropriate, challenged as inaccurate based upon empirically gathered data. Economic models dealing with land are often distinctly counterfactual; in ways illustrated in the following paragraphs.

Another caveat: by "Real World" I mean the world as understood chiefly by scholars and land-dwellers who have studied it with greatest care and reflected deeply about how humans fit into it; I mean, to use Leopold's term, the speech of those who know the rivers and hills and how people actually use them. The extent of human ignorance about land, for instance—a characteristic that I attribute to the Real World (see paragraph 2)—is most evident to those who study land professionally and to those whose interactions with land are regularly met with mystery and surprising results. Those who study land also see vastly more interconnections among land parcels, and externalities from particular land uses, than those with little knowledge of actual lands.

conservation-related disputes routinely take place on abstract parcels in which landowner use rights are defined with little or no regard for such irrelevant considerations as the land's natural features and how the land might safely be used.

2. The people who reside in the Real World are live homo sapiens, which is to say extraordinarily complex living creatures. They are not the mechanical, one-dimensional beings that so often inhabit the landscapes of Theory World. Real World people live busy, distracted lives. They know only modest amounts about the world in which they live, particularly the natural world. Even the most knowledgeable experts have only fragmentary understandings of how the use of one parcel affects other land parcels, near and far. The preferences and understandings of Real World people are greatly influenced at any given time by prevailing cultural values, particularly the values and messages embedded in institutions of daily life. Only in Theory World are the externalities of one land use easily traced by neighboring landowners and by anyone else interested in them. Only in Theory World, too, can one readily determine whether external effects are bad or good; in the Real World, ecological ripples are often ambiguous and inscrutable.

3. In the Real World, ignorance is a constant, nagging companion. Information can sometimes be obtained, but it is fragmentary, often flawed, and commonly intertwined with intuitive, tentative judgments about ethics and aesthetics. Because of these limitations, sound land use decisions cannot be based solely on the known and provable. In Theory World, people are typically perfectly informed or they can acquire full information simply by incurring "transaction costs." Land use decisions are easily made once adequate information is obtained.

4. In the Real World, food comes from natural systems, ultimately and chiefly from fertile soil, which is complexly related to ecosystem processes and resident biodiversity. People interested in food issues concern themselves with the healthy functioning of these natural systems. In Theory World, food comes from a place called "the Economy" and inhabitants are concerned almost exclusively about its aggregate performance. Because raw food is such a small part of the Economy (in the United States) it need not be thought about very much; indeed, so long as the market is not disrupted it need not be thought about at all.

5. In the Real World, people watch birds, which they deem valuable, which they share with one another, and which they view as a form of common wealth. In Theory World, things gain value when they become part of the Economy, and it is wasteful and typically inefficient to buy something the benefits of which one cannot enjoy exclusively.⁸ As for things such as wild birds, their destruction entails no economic cost and therefore is not counted as loss in any measure of the Economy's health.

8. Of course, some people by this measure do seem to act foolishly, but in reality they are still simply maximizing their individual welfare. The feeling of doing good for the community is just another benefit that one buys, which means that even people who seem to be acting selflessly are really just as selfish as anyone else (see paragraph 11).

6. In the Real World, efficiency is one of several, often conflicting attributes used to choose the best means of achieving particular goals. In Theory World, efficiency serves as a normative goal as well, often wielding so much power that it overrides other goals.

7. In the Real World, people expect to be dealt with fairly, by government as well as other people, and they expect ownership norms to reflect prevailing ideas of fairness. In Theory World, fairness has little bearing either in property law or in the expectations imposed on owners. The law's function is to define rights clearly and then protect them securely. Even distinctly unfair allocations of rights are acceptable so long as market forces operate without restraint. As for the conduct of private owners, they have no particular obligation to act fairly: they are obliged merely to comply with those few laws that have moral content to them (which few property and environmental laws possess). Otherwise, landowners may freely violate laws, just as they may renege on all contracts, so long as they are prepared to make amends when their activities trigger civil liabilities or criminal penalties.⁹

8. In the Real World, people talk about the good of their neighborhoods, communities, and landscapes. They often look to government to promote their common interests and to protect them from harms that they can ward off only by means of organized action. In Theory World, "public interest" is at best a suspect idea. To the extent a public interest exists it rarely deviates from the summed preferences of people acting as autonomous, self-centered individuals. Government in Theory World need not and does not protect people from having their livelihoods and communities destroyed by market forces, nor does it protect the nonhuman natural world from similar destruction.¹⁰

9. In the Real World, people take ethical issues seriously, often grounding their beliefs in long-standing religious traditions. Many ethical ideals are viewed as holding objective existence, and people believe that morals should inform public as well as private life. In Theory World, ethics is chiefly a matter of personal preference, save for norms that prohibit people from overtly harming one another. Ethics has virtually nothing to do with using nature, with running businesses, or with voting in legislative chambers.

10. In the Real World, the public has legitimate interests in private land use and in the long-term conservation of all land. In Theory World, no one aside from the owner of a parcel has a legitimate interest in how land is used, so long as uses of it do not physically invade neighboring space or otherwise amount to clear nuisances (in which case only those harmed can complain). Thus, community members have no legitimate complaint should an owner of land kill every living thing on it, eroding its soils and turning it into a barren wasteland.¹¹ To destroy land owned by another person also

9. Unless, of course, they can avoid being detected or can otherwise frustrate the imposition of liability, which they are perfectly free to attempt (and, indeed, if a public corporation, perhaps bound to do so by duties to maximize shareholder income).

10. Save when it protects privately owned land from destruction that is neither undertaken nor approved by the owner.

11. Community members of course, might prefer that lands be used differently, but such preferences would be properly implemented through negotiation and the payment of compensation.

does not present a public issue: once the land's owner is compensated for the loss in cash by the one who occasioned it, all has been made whole. The transfer of money to the present owner is always a full remedy for the destruction of nature.

11. In the Real World, people commonly feel a collective moral obligation to preserve other species and to sustain the health of landscapes for use by future generations. In Theory World, such concerns are best understood as mere individual preferences, which people should act upon as they see fit through their personal activities. To pursue such individual preferences is, as is always the case, to act for personal gain. Thus, a person who spends money to conserve land for the community as a whole or for future generations is simply pursuing one of the infinitely varied forms of personal gratification.

12. In the Real World, integrated communities of human and nonhuman life can be more or less healthy in terms of their natural productivity and their ability to flourish in ecological terms. Accordingly, measures of ecological functioning and biodiversity are important indicators of community well being. In Theory World, all valuable products come from the Economy, which provides the sole important measure of public welfare and which is not significantly constrained in its perpetual expansion by nature. Thus, measures of ecological functioning or of landscape biodiversity are not of long-term value (except perhaps on issues of aesthetics).

13. In the Real World, private property is a complex, organic, shifting institution, chiefly if not entirely aimed at promoting the well being of a law making community—the *demos*—overall. Over time, the rights and responsibilities of private ownership shift with changing circumstances and cultural values, and rightfully so, given that private property retains its philosophic justification only so long as it undergirds the collective well being. In Theory World, matters are vastly more simple. Though judges over time have sometimes handed down bad decisions and though it took judges a while to get the law down right (which occurred during the Gilded Age of the 19th century), the legal rights of private landowners have been essentially static. Properly conceived, the rights and responsibilities of private owners do not and have not evolved (except perhaps to reduce transaction costs). Hence, when the Founding Fathers defended private property in the late 18th century they had in mind pretty much what theorists in Theory World mean by property today, even if they did not know it.

14. In the Real World, landowners engage in harmful activities—banned by the long-standing *sic utere* principle—whenever their conduct deviates from communally established ideas of right and wrong behavior. Ideas about right and wrong evolve over time, as circumstances shift, ecological knowledge widens, and prevailing cultural values unfold. The idea of “harm,” that is, has real meaning in a given time and place, even while it is regularly contested. A law that allows one land use to proceed while halting a second, inconsistent land use implements community ideas of right and wrong, thereby setting essential public policy. In Theory World, harm as an idea is logically empty except in

cases of clear cross-boundary interferences. Otherwise it is logically impossible, when adjacent land uses conflict, to say that one landowner is harming another. A government action that favors one land use over another is either an initial allocation of property rights (and thus acceptable, no matter who gets the right) or it is a shift of rights from one landowner to another, which is a form of theft (rent-seeking) and can only be undertaken with compensation. Government's chief role in resolving resource use disputes is to enforce existing rights and facilitate private bargains, not to pass communal judgment on the desirability of competing land uses.

15. In the Real World, law is viewed as an expression of community morality; it embodies and carries forward ideas about right and wrong, setting and resetting over time the moral boundaries between the individual and government. People look to the law for guidance on what is proper and improper, and law serves important educational functions, which it can perform either well or poorly. Law also reflects and hence inculcates particular understandings about how people fit into the natural world, which again can be done either well or poorly. To the extent that law is based on bad ethics, inculcates bad messages, or improperly draws the line between individuals and the community, it needs to be changed to avoid causing harm. In Theory World, such considerations are largely irrelevant, at least in the context of private land. As for messages, the law conveys none, save perhaps for the importance of protecting private rights.¹²

16. In the Real World, the law's assignment of rights to use land and other parts of nature largely determines whether or not a given owner's desired activity can proceed. Negotiations over land and resource uses are uncommon except in business settings; ordinary landowners rarely negotiate with one another to resolve land use conflicts. The law's determination of rights, therefore, largely holds. For inhabitants of the Real World it is therefore vital that the law's recognition of rights and responsibilities remain fair and conducive to community well being. In Theory World, in contrast, the law's assignment of landowner rights is largely irrelevant: it is merely the starting point for negotiations, which people undertake readily whenever it appears economically attractive to do so. Everyone is always prepared to cut deals, and it is considered very good to have neighborly relations centered around frequent, hard-nosed negotiations.

17. In the Real World, many environmental goals can only be obtained by means of collective, governmental action. Thus, to deprive people of chances to act collectively through government is to curtail seriously their liberties. Liberty, that is, has a positive component as well as a negative one. In Theory World, liberty is defined solely to mean freedom from governmental interference with individual action. Since liberty deals only with protection against what government does, actions by corporations and other

12. Thus, for instance, a property-rights regime that depicts nature as fragmented into discrete resources is not subject to criticism on the ground that it fosters ecological ignorance. In the event that individuals prefer to see particular land uses altered (for instance, because they are destructive), they should negotiate with the owners of the land to bring about the changes. So long as private rights in land are secure and clearly defined, the law is not to blame for the destruction of nature.

nongovernmental entities are never infringements of individual liberty. In Theory World, collective action is permissible, but only when and so long as private property owners are fully compensated for any losses.

18. In the Real World, people often think of democracy in terms of majority governance over matters of public interest. In Theory World, democracy is best understood instead in terms of individual self-governance. Accordingly, a world in which each individual gets to act free of constraints imposed by others—including law making majorities—achieves the maximum democracy. In the case of land, a world in which owners are completely free to destroy their pieces of nature (so long as they do not visibly harm other landowners) is to that extent a wonderful place.

19. Law making in the Real World is done chiefly by legislatures and administrative bodies, which keep the law up to date, having taken over the function for the most part from common-law courts. Landowner rights and responsibilities at any given time are determined by taking into account all relevant laws. In Theory World, property law is set by the common law and is essentially timeless. Statutes and regulations, therefore, are best understood as interferences with existing rights, and the less interference the better. As for keeping property law up to date, the idea is suspect: the chief reason to change property law would be to alter resource use practices, and that is best arranged through market transactions.

20. In the Real World, people view human behavior as a highly complex phenomenon, with multiple, often inscrutable causes. Because such complexities and the difficulties of tracing causation, the study of history is a difficult undertaking. Even the best trained historians see the world complexly and are reluctant to attribute causation. In Theory World, the study of human action, present and past, is vastly easier. People always act selfishly, and economic forces account for pretty much everything good that takes place. Hence, any good activity that can be correlated in time or space with economic growth is caused by such growth. Bad activities, in contrast, are frequently due either to government interferences with the market or to poorly defined or insecure property rights: human selfishness, ignorance, or short-sightedness are never to blame. As for the writing of history, the recipe is typically simple once the right theory is known: select the right theory, collect anecdotal data that seems consistent with the theory, and then slap on the name “cliometrics.” Real training in history is unneeded, and it is typically unnecessary to look at the works of historians who lack the rigor of cliometrics.

21. In the Real World, people worry about whether landscapes are being properly used in ecological and ethical terms. Some of them study the history of land use practices and gauge the land’s condition by carefully studying the land itself. In Theory World, the study of actual land is rarely needed because of the incredible predictive power of theory. Thus: (i) if land is held by an individual owner with secure private rights, it is well tended; (ii) if it is an open-access commons, it is degraded; (iii) if it is state-owned land it is poorly used, but not as poorly as the open-access commons.

Any evidence not predicted by economic theory either does not exist or is almost certainly false.

II. “The Oldest Task”

Simplification is an inevitable part of any effort to make law or to comment on it. Simplification brings gains, in terms of reduced complexity and ease of application, but it brings well-known costs as well, as when an otherwise ideal legal outcome is rendered illusive because salient facts are deemed irrelevant. The problem with law-and-economics writing on land, then, is not the fact of simplification and abstraction, but the degree of it and how it is done. Far too much is excluded, and the principles of exclusion—the gatekeeping political correctness tests, one might say—largely screen out views of land as a complex, living, morally infused community of life. Far from being a neutral analytic construct, the scholarship is, in distilled forms, ecologically impoverished and morally and aesthetically constrained.¹³

What, then, might an understanding of landed property rights look like that takes into account, not just the hypothetical Greenacre that Professors Merrill and Smith want to recover, but vastly more than that? What might landed property look like, that is, in a legal scheme that attempts, insofar as possible, to situate itself in the Real World and that draws upon the best writing, from all disciplines, dealing with humans and land?

One could devise a number of variants of such a property scheme. No single effort, however, could draw in all conceivably relevant considerations: simplification is essential. Then, too, the various goals of private property do not fit together easily, which is to say trade offs are unavoidable. Private property undergirds economic growth and the market, and any sound regime needs to give that role great weight. Yet property serves other vital functions as well, promoting the land’s health being among them. Because tensions exist among these multiple aims, compromises are inevitable.

My own work over the past decade and a half supplies one perspective on the possibilities available. I draw upon it, not because it is the best or most complete, but for a decidedly practical reason: it is the example I know well. Then, too, having offered a personal critique of law-and-economics scholarship it is perhaps only fair to expose plainly my own, far different work, that others might weigh the merits of my perspective.

Whatever progress I have made on these issues has come in no small part by screening and appropriating the work of others, chiefly writers outside of law. These borrowings have built up over the years into quite a huge pile, an indebtedness that I have sought to acknowledge fairly in my writings, though doubtless with nothing close to full success.

13. In presenting my complaint I do not mean to overlook either the many variations in scholarly views (*see supra* note 5) nor the more sensitive qualifications that appear in the vast literature on the subject. My reasons for focusing on the more distilled and simplistic forms of this scholarship are several. (1) It is in this form that the scholarship passes outside the academy and into public discourse, and it does so because the scholarship lends itself so readily to such simplification. (2) Even in the academic realm ideas get simplified, and simplifications within the academy tend to reflect the ideas I criticize, expressly or implicitly. (3) Even scholars who recognize limits on models often do so by way of asides, without modifying the fundamental elements of the models; qualifications, that is, are at times given little more than lip service.

Though I cite in the following paragraphs chiefly my own works, one can find in them references to many of the key works from which I have gleaned.

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Philosophic Justification. Writing on landed property needs a firm grounding in the philosophic justifications for private ownership. The only sound justification in my view—sound not just in persuasiveness but in justifying anything like the property regime we now have—is a consequentialist rationale linked to the good of the people collectively—the *demos*, the ultimate source of sovereignty in our nation. Private property is a good thing because and so long as it promotes the good of the people. Liberal theory proposes a more individualistic justification, but its justification is irretrievably vague and, in my view, of little help in resolving the kinds of disputes that arise today.¹⁴ As for natural-rights justifications, including John Locke's labor theory, they were wisely cast aside during the first half of the 19th century and do not withstand scrutiny today. In light of this communitarian justification, property law is rightly understood as a creation and instrument of the majority's will (in contrast, for instance, with the Just Compensation Clause of the U.S. Constitution, which protects the individual from majoritarian action).¹⁵

Historical Evolution. Because the circumstances and needs of people shift over time it is inevitable and, indeed, essential that ownership norms be kept up to date. How

property has evolved in the United States over the past two centuries is not easy to chart, though the story's main outlines are reasonably known. Forces external to the law (including economic ones) have largely accounted for these changes, but the law's internal logic and inertia have also played roles. The tale, in brief: property norms in the 19th century shifted in ways that allowed owners to make more intensive uses of their lands and resources, thereby facilitating industrial expansion. In the process, the rights of neighboring owners and communities declined as they lost their legal powers to obtain redress against many types of harm, including ecological harm. Since the end of the 19th century the direction of change has largely been reversed. Over time, landowners vested with intensive land use rights created unacceptable land use harms, including harms to natural systems. Twentieth-century legal changes have reduced those harms by restraining the powers of landowners in many settings to engage in particular types of damaging activities. As that has happened, landowners pursuing more sensitive land uses—as well as downwind and downstream landowners generally—have regained some of the legal protections they once enjoyed. Ironically, developments since 1950 have given rise to legal norms of ownership that look increasingly like norms that governed when the 19th century began. In any event, changes over the past two centuries are not aptly interpreted as either increasing or decreasing private property rights in land. They are better viewed as reconfigurations of such rights, as lawmakers have rebalanced landowner rights to use what they own against the rights of neighbors and surrounding communities to protest against resulting harms.¹⁶

14. Liberal theory leads primarily in the direction of welfare entitlements and to such matters as greater security in residential tenancy arrangements. Generations ago the argument led chiefly toward public lands policies that made land freely available at low cost for families to set up subsistence homesteads. WILLIAM B. SCOTT, *IN PURSUIT OF HAPPINESS: AMERICAN CONCEPTIONS OF PROPERTY FROM THE SEVENTEENTH TO THE TWENTIETH CENTURY* 36-70 (1977). As for the stronger claims today that expansive property rights are needed for self-fulfillment—often made by market enthusiasts and libertarians—they fail to provide any meaningful way to reconcile the problems that constantly arise when one person's ownership or use of a thing owned adversely affects others, whether by interfering with their free activities or denying them similar property-related opportunities. When an owner's interests at stake are acute (as in the need for personal food and shelter) they might rightly trump competing claims. But when interests are not acute the liberal argument runs aground because of its inability to reconcile competing interests. Benjamin Franklin, for instance, was prepared to limit the liberal argument quite severely, to "the savage's temporary cabin, his matchcoat, and other little acquisitions, absolutely necessary for his subsistence." All other property was "the creature of public convention" and thus subject to regulation, not just of how it was used, but how much one could own. *Quoted in id.* at 21. Jefferson was among those for whom the liberal argument centered on the right of unemployed to gain land for subsistence. Jefferson went so far as to say that the private ownership of vacant land by wealthy citizens, while poor people went unemployed, was a violation of the natural rights of the latter. *Id.* at 42. A leading liberal text on property is MARGARET JANE RADIN, *REINTERPRETING PROPERTY* (1993); the literature of which it is a part is usefully assessed in Arnold, *supra* note 2, at 322-27.

15. ERIC T. FREYFOGLE, *BOUNDED PEOPLE, BOUNDLESS LANDS: ENVISIONING A NEW LAND ETHIC* ch. 6 (1998) [hereinafter *BOUNDED PEOPLE*]; Eric T. Freyfogle, *Regulatory Takings, Methodically*, 31 ELR 10313 (Mar. 2001) [hereinafter *Regulatory Takings*]; Eric T. Freyfogle, *Owning the Land: Four Contemporary Narratives*, 13 LAND USE & ENVTL. L. REV. 279 (1998) [hereinafter *Owning the Land*]; Eric T. Freyfogle, *Ethics, Community, and Private Land*, 26 ECOLOGY L.Q. 631-61 (1996) [hereinafter *Ethics, Community, and Private Land*]; Eric T. Freyfogle, *The Owning and Taking of Sensitive Lands*, 43 UCLA L. REV. 77 (1995) [hereinafter *Owning and Taking*].

16. Eric T. Freyfogle, *Community and the Market in Modern American Property Law*, in LAND, PROPERTY, AND THE ENVIRONMENT 382 (John F. Richards ed., 2002) [hereinafter *Community and the Market*], reprinted without references as *Property Rights, the Market, and Environmental Change in 20th Century America*, 32 ELR 10254 (Feb. 2002); Eric T. Freyfogle, *Eight Principles for Property Rights in the Anti-Sprawl Age*, 23 WM. & MARY ENVTL. L. & POL'Y REV. 777 (1999) [hereinafter *Eight Principles*]; Eric T. Freyfogle, *Owning and Taking*, *supra* note 15; *Land Use and the Study of Early American History*, 94 YALE L.J. 717 (1985). In a trilogy of pieces I have explored the evolution of private rights to use surface waters in California. Eric T. Freyfogle, *Lux v. Haggin and the Common-Law Burdens of Modern Water Law*, 57 U. COLO. L. REV. 485 (1986); Eric T. Freyfogle, *The Evolution of Property Rights: California Water Law as a Case Study*, in PROPERTY LAW AND LEGAL EDUCATION: ESSAYS IN HONOR OF JOHN E. CRIBBET 73 (Peter Hay & Michael Hoeflich eds., 1988); Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529 (1989). In the first of these pieces, I offer comments on the origins of prior appropriation law in California that differ considerably from standard law-and-economics interpretations.

Many scholars seem distinctly troubled by the idea that private ownership norms might overtly change over time through legislative action. The worry—a legitimate one—is that private property in various settings might be redefined out of existence or otherwise unfairly taken without the payment of just compensation. If legislatures have full power to redefine private rights, has not the Just Compensation Clause been erased from the U.S. Constitution? The key to a resolution of this issue is to recognize that (i) not all legislative action regarding property amounts to a redefinition of widely applicable ownership norms, and (ii) changes in property law can be illegitimate as well as legitimate, with the former restrained by the Just Compensation Clause. As I have urged elsewhere, Takings jurisprudence is due for an overhaul. Should the U.S. Supreme Court overtly recognize the power of legislatures to redefine property, it might then proceed to explain clearly the two main roles of the Just Compensation Clause: to protect landowners who have been singled out for mistreatment under then-prevailing law, and to distinguish between legitimate and illegitimate shifts in ownership norms. *Regulatory Takings*, *supra* note 15; *Owning and Taking*, *supra* note 15.

Ecological Interdependence. Just as a sound property scheme needs grounding philosophically and culturally, so too it needs grounding in the natural order. Here the work of biological scientists has helped immensely, though the themes of interconnection and interdependence also appear thoughtfully in writings by nonscientists. In the natural world, land parcels are not distinct; they are complexly woven into large landscapes. Land uses on one parcel inevitably have ripple effects that spread beyond boundaries. Indeed, so important are such effects that one wonders whether it might be useful to rethink private property beginning from an entirely new point: to begin, not with the basic assumption that land parcels are distinct from one another (adjusting, then, to take into account externalities), but with the opposite assumption of complete interconnection among lands and land uses, with adjustments then made to accommodate the uncommon landowner activity that is discrete. In any event, externalities are pervasive, hard if not impossible to trace, and in many instances difficult to evaluate in terms of their goodness or badness. Infusing all attempts to study land is the ever-present reality of human ignorance—as the best writers on nature and culture have always recognized. Responsible land use takes this ignorance into account and seeks ways to accommodate it. Ideally, a sound property rights regime would encourage if not demand such humility.¹⁷

Ethical Aspects. How people fit into the natural world has been, for decades, a question that philosophers have explored seriously. From their efforts has come an important body of work.¹⁸ One part of that work, the animal-welfare strand, considers the treatment of individual animals as such. In tension with this strand is the main body of environmental ethics, which focuses instead on the healthy functioning of land as a community. Also appearing prominently are moral claims that humans living today owe duties to fu-

ture generations, in terms of preserving all life forms and sustaining a wide variety of natural landscapes. According to surveys of public values, the vast majority of Americans agree that dealings with nature present issues of ethics as well as expediency,¹⁹ which is to say that environmental ethics is no mere scholarly pursuit. Given these popular views, a property-rights regime could legitimately take ethical norms into account when prescribing limits on landowner activities. Indeed, if there is truth to Charles Darwin's theses on the evolution of human ethics, we should expect prevailing moral sentiments to unfold in ways that recognize greater moral value in nonhuman life.²⁰

Whatever ethical duties we might recognize, whether direct duties to nature, e.g., duties to endangered species,²¹ or indirect ones, e.g., by means of duties to future generations,²² such duties can only be *collective* obligations, borne by a community as such, rather than duties that fall on individuals in isolation (who could not fulfill them). Should a community decide that particular interactions with nature are in fact morally wrong it would have adequate cause to prohibit them, though of course countervailing considerations would need weighing.²³

An Overall Goal. For decades the literature on human-nature interactions has featured ongoing discussions about the best standard to use in judging whether humans are living wisely and ethically in relation to the larger natural order. Once developed, such a standard could help set proper limits on humanity's manipulation of the land. In international circles the standard of sustainable development has found considerable favor. In other settings, other standards have been put forth and defended. A prominent early writer to address the issue was Leopold, who in the 1930s bemoaned the internal conflicts that then beset conservation efforts.²⁴

17. BOUNDED PEOPLE, *supra* note 15; ERIC T. FREYFOGLE, JUSTICE AND THE EARTH: IMAGES FOR OUR PLANETARY SURVIVAL (1993) [hereinafter JUSTICE AND THE EARTH]; ERIC T. FREYFOGLE, *A Durable Scale*, in THE NEW AGRARIANISM: LAND, CULTURE, AND THE COMMUNITY OF LIFE (2001); ERIC T. FREYFOGLE, *The Construction of Ownership*, 1996 U. ILL. L. REV. 173; ERIC T. FREYFOGLE, *The Moral Psychology of the Environmental Age*, in ENVIRONMENTAL POLICY WITH POLITICAL AND ECONOMIC INTEGRATION 35 (John Braden et al. eds., 1996); ERIC T. FREYFOGLE, *The Ethical Strands of Environmental Law*, 1994 U. ILL. L. REV. 819; ERIC T. FREYFOGLE, *Ownership and Ecology*, 43 CASE W. RES. L. REV. 1269 (1993). Plainly, ecological interdependence is a difficult reality to incorporate into a property regime that gives landowners reasonable flexibility to act in isolation. On this point as on others, trade offs must be made.
18. I refer here to bodies of writing by academics and secular social critics, which have blossomed chiefly over the past half century. Speculation and writings on the subject, of course, go back to the earliest know historical periods, and formed important strands of many religious traditions. A useful introductory text is PETER WENZ, ENVIRONMENTAL ETHICS TODAY (2001). The best historical survey is RODERICK FRAZIER NASH, THE RIGHTS OF NATURE: A HISTORY OF ENVIRONMENTAL ETHICS (1989), though Nash's attempt to portray environmental ethics as largely an extension of earlier liberal reforms has drawn little agreement. A provocative attempt to synthesize differing ethical perspectives into a single platform is offered in BRYAN G. NORTON, TOWARD UNITY AMONG ENVIRONMENTALISTS (1991). Perhaps the leading scholar today, in terms of practical value to working conservationists, is J. Baird Callicott, whose writings have been numerous. *E.g.*, J. BAIRD CALLICOTT, BEYOND THE LAND ETHIC: MORE ESSAYS IN ENVIRONMENTAL PHILOSOPHY (1999). I consider the most prominent ethical claim, the land ethic of Leopold, in ERIC T. FREYFOGLE, *A Sand County Almanac at 50: Leopold in the New Century*, 30 ELR 10058 (Dec. 2000) [hereinafter SCA at 50]; ERIC T. FREYFOGLE, *The Land Ethic and Pilgrim Leopold*, 61 U. COLO. L. REV. 217 (1990) [hereinafter *Pilgrim Leopold*].

19. *E.g.*, WILLETT KEMPTON ET AL., ENVIRONMENTAL VALUES IN AMERICAN CULTURE (1995) [hereinafter ENVIRONMENTAL VALUES].
20. See ROBERT J. RICHARDS, DARWIN AND THE EMERGENCE OF EVOLUTIONARY THEORIES OF MIND AND BEHAVIOR (1987). Leopold would make prominent use of Darwin's evolutionary ideas in the opening paragraphs of his essay, *The Land Ethic*, the final piece in his A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE (1949) [hereinafter A SAND COUNTY ALMANAC].
21. See ENVIRONMENTAL VALUES, *supra* note 19, 109-14 (showing, *inter alia*, 87% public support for idea that "all species have a right to evolve without human interference" and 90% support for idea that "preventing species extinction should be our highest environmental priority").
22. *Id.* at 99 (97% public support for idea that people living today "have to protect the environment" for future generations, "even if it means reducing our standard of living today").
23. BOUNDED PEOPLE, *supra* note 15; JUSTICE AND THE EARTH, *supra* note 17; *Ethics, Community, and Private Land*, *supra* note 15; *The Ethical Strands of Environmental Law*, *supra* note 17; *Pilgrim Leopold*, *supra* note 18.
24. The literature on Leopold is substantial, though by no means in proportion to his importance in the history of conservation thought in the United States. He is the object of a highly perceptive biography. CURT MEINE, ALDO LEOPOLD: HIS LIFE AND WORK (1988) [hereinafter ALDO LEOPOLD]. Though recognized in his day as the leading figure in wildlife management and wilderness preservation—and in serious conservation thought generally—much of his most thoughtful writing was left in manuscript form upon his death in 1948. Some of it has since seen the light of day, chiefly in ALDO LEOPOLD, FOR THE HEALTH OF THE LAND: PREVIOUSLY UNPUBLISHED ESSAYS AND OTHER WRITINGS (J. Baird Callicott & Eric T. Freyfogle eds., 1999) [hereinafter FOR THE HEALTH OF THE LAND]; RIVER OF THE MOTHER OF GOD, *supra* note 6. Also useful is SUSAN FLADER, THINKING LIKE A MOUNTAIN: ALDO LEOPOLD AND THE EVOLUTION OF AN ETHICAL ATTITUDE TOWARD DEER, WOLVES, AND FORESTS (1974). See SCA at 50, *supra* note 18; *Pilgrim Leopold*, *supra* note 18.

Conservation needed a unifying goal, he asserted. The goal Leopold would produce and which he proposed as a guide for good land use was one that he termed (with undue simplicity) “land health.”²⁵ Once formulated, the goal became the centerpiece of his thoughts about humans and land.²⁶ When late in life Leopold crafted his now well-known land ethic, he would think of it, not chiefly as an end, but as a means—as a tool to prompt landowners to use what they owned in ways consistent with the land’s lasting health.

In terms of contemporary work on this indispensable issue, a recent survey divides serious conservation thought into two primary approaches: those that focus on the maintenance of ecological functions or systems (the functionalists) and those that focus instead on the biological composition of natural communities (the compositionists).²⁷ Many writers who approach this issue see it largely as a question of ecological science. Others, including the prominent conservation writer Wendell Berry, embrace more general understandings of the issue, often drawn (as in Berry’s case) from a lifetime of gaining sustenance directly from land. Like Leopold, Berry views the health of the land collectively as “the one value,” the one “absolute good” that needs to give shape to the human enterprise. In expressing his perspective (which he is wont to do forcefully), Berry poses a direct challenge to American individualism: “I believe that the community—in the fullest sense; a place and all its creatures—is the smallest unit of health and that to speak of the health of an isolated individual is a contradiction in terms.”²⁸ A law making community that took such thought seriously could legitimately revise its private ownership norms so as to bring them into alignment with it, given the vital link between private property and the common good. Of course, private property does serve multiple functions, some of which are diminished by frequent or unexpected shifts in landowner rights. The pursuit of land health would likely take time and require tact.²⁹

25. *E.g.*, Aldo Leopold, *The Land-Health Concept and Conservation, in FOR THE HEALTH OF THE LAND*, *supra* note 24.

26. With its focus on the successfully long-term functioning of ecosystems, land health as proposed by Leopold did not fully implement his ethical understandings on the biotic right of other species to exist, not did it (as would his land ethic) draw in Leopold’s ideas about the bountiful aesthetic harvest the humans could enjoy by living in a naturally healthy land. *SCA at 50, supra* note 18.

27. J. Baird Callicott et al., *Current Normative Concepts in Conservation*, 13 *CONSERVATION BIOLOGY* 22 (1999), discussed in DALE D. GOBLE & ERIC T. FREYFOGLE, *WILDLIFE LAW: CASES AND MATERIALS* 1355-56 (2002) [hereinafter *WILDLIFE LAW*].

28. Wendell Berry, *Health Is Membership*, in WENDELL BERRY, *ANOTHER TURN OF THE CRANK* 90 (1995). I consider some of the ideas of Berry—whom I view as the most important writer on humans and land in the second half of the 20th century—in *BOUNDED PEOPLE, supra* note 15, chs. 5, 7; Eric T. Freyfogle, *The Dilemma of Wendell Berry*, 1994 *U. ILL. L. REV.* 363.

29. *BOUNDED PEOPLE, supra* note 15, ch. 3 (proposing a modified version of land health as a goal with an accompanying procedural component to tailor the goal to particular landscapes); *SCA at 50, supra* note 18 (exploring Leopold’s idea of land health); Eric T. Freyfogle, *Consumption and the Practice of Land Health*, in LAURA WESTRA & PATRICIA WERHANE, *THE BUSINESS OF CONSUMPTION: ENVIRONMENTAL ETHICS AND THE GLOBAL ECONOMY* 181 (1998) [hereinafter *Consumption and Land Health*]; Eric T. Freyfogle, *Repairing the Waters of the National Parks: Notes on a Long-Term Strategy*, 74 *DENV. L. REV.* 815 (1997); *Illinois Life: An Environmental Testament*, 1997 *U. ILL. L. REV.* 1081 [hereinafter *Illinois Life*]. I consider the proper roles of science generally in land management in Eric T. Freyfogle, *Putting Science in Its Place*, 16 *CONSERVATION BIOLOGY* 863 (2002) (with Julianne Lutz Newton) [hereinafter *Science in Its Place*].

Liberty and Collective Action. Environmental goals at the landscape scale are matters that can be achieved only through collective action. For reasons that economists ought to be in the forefront of proclaiming, they are also ones that cannot be attained fairly and efficiently through voluntary steps alone. Many require that particular lands be devoted to particular uses—for instance, in the reconstruction of wildlife corridors. Coercive measures, of course, are typically inappropriate when cooperation can be obtained in other ways. But fairness and efficiency issues again can make voluntary approaches undesirable, as economists ought to emphasize but typically do not.³⁰ Given that so many land-related goals realistically do require government action, libertarian political visions necessarily undercut their achievement. In doing so, they deny citizens who support such goals any effective means of attaining them. In policy terms, that is, they are strongly slanted against healthy lands, nonhuman life, and future generations.

When liberty is viewed as having positive as well as negative components, libertarian schemes appear in a different light: not as perspectives that maximize liberty overall, but as ones that maximize negative liberty (an individual’s freedom from government restraint) at the cost of diminishing positive liberty (the individual’s freedom to engage with others in collective self-governance). Maximum negative liberty inevitably fosters environmental degradation, as the history of land use in the United States makes clear (and as economic theory would readily predict).

Advocates of minimal government offer two common responses to this line of reasoning, but neither is adequate.

One answer is to send those who want environmental protection into the market to buy what they want. The problem here is that many environmental goods are simply not for sale. Moreover, to the extent the market can help with parts of what buyers want, the prices charged are grossly unjust to those doing the buying. Because of free-rider problems, the few would be compelled to buy something for the good of all. Moreover, it is simply unfair for those damaging the public interest to demand payment to halt their harm.

The second libertarian answer one hears retreats even further: land health and other environmental goals are contested matters, and as such are improper objects of public policy. Or to offer a variant: environmental goals such as these are ethical aims, and it is improper for government policy to pursue one ethical vision over another. This an-

Although land and resource owners clearly need an element of security in their rights if they are to make major investments in their property, that need for security is far from absolute and requires balancing against competing concerns. I have attempted such an effort in the context of private property rights in water in Eric T. Freyfogle, *Water Justice*, 1986 *U. ILL. L. REV.* 481.

30. By fairness I mean, of course, fairness to those citizens who are willing to use their lands properly and who should not, in fairness, be burdened with doing more than their respective shares. Libertarian literature by and large ignores these citizens and their entitlements to fair treatment, just as, in its defense of one landowner’s right to use land intensively, it often overlooks the rights of neighboring landowners who are harmed by such uses. Once these blinders are deployed, it is possible to see all landed property rights disputes as dramas between the individual in isolation and the law making community, overlooking the fact that the vast majority of all property regulation is undertaken to balance the competing claims among property owners. The most skillful libertarian polemicists eschew all use of the term “community,” and indeed often forego even the term “government,” in favor of the term “state” with its subtle fascist overtones. *E.g.*, RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* (1985).

swer, though, is no more sound than the first. Government policies are inevitably based on a land ethic, whether or not respectful of nature; there is no neutral or ethic-free approach.³¹ Policies that allow widespread degradation are no more ethically neutral than those that restrain it. This second answer also overlooks the critical truth that private property draws its justification from the good of the people collectively. Extensive negative liberty arguably might best achieve that good, but the factual case would need to be made. Certainly a study of successful property regimes around the world and over time would suggest that balanced blends of positive and negative liberty often work far better.³² In any event, there is simply no reason why, in the long run, property norms should allow owners to engage in conduct that the community deems harmful.³³ As courts once commonly put it, *salus populi suprema lex est*.³⁴

Communitarian Roots. As several of the above paragraphs have implied, land health, however defined, is a goal that makes sense only as a communal aim, much like national defense (to which it bears many similarities). Once again, conservation giant Leopold set the tone of many contemporary understandings with his clarion for readers to join him in seeing the land as a unified community: “We abuse land because we regard it as a commodity belonging to use. When we see land as a community to which we belong, we may begin to use it with love and respect.”³⁵ Leopold’s communitarian message encouraged readers to perceive the central reality of ecological interconnection. Later writers would pick up on Leopold’s insights, expanding his critique to show how central elements of classical liberal thought have contributed powerfully to misuses of nature.³⁶

Though widely viewed as a liberal cause, environmentalism in fact stands in stark opposition to liberalism as classically understood, particularly to liberalism’s extreme modern form, political libertarianism. The political soulmates of environmentalism are not liberation movements or causes championing strong individual rights but other movements that also promote communal visions. Cultural views that exalt the parts while ignoring the whole—the free market chief among them—operate in tension with all such communal views.

Because of its communitarian cast, environmental thought has been uneasy about recurring proposals to incorporate an environmental amendment into the Bill of Rights,

in the form of some sort of individual entitlement to a healthy or healthful environment. The idea of environmental health is, of course, appealing. But the rhetoric of individual rights is itself a fragmenting force. To speak of individual rights is to cloud the understanding that land health is first and foremost a collective good. Moreover, the pursuit of land health entails the exercise of positive liberty, thus setting it apart from the various negative liberties now protected in the Constitution.³⁷

The Messages of the Market. Given the ecological, communitarian focus of the dominant strands of conservation thought, it is unsurprising that the market is viewed as a troublesome institution due to its potent, embedded messages. In the world according to the market, people appear as individual consumers and producers, not as community members. Nature, too, is fragmented, into discrete commodities and parcels of land. Related to these troubling messages is the market’s method of equating value with the price a piece of nature would fetch if offered for sale. To view nature through market-eyes is to see, not an ecologically integrated whole, but a huge mass of discrete things, some valuable, most not. Ecological interconnection is not merely overlooked by market culture: it is affirmatively displaced by an opposing assessment in which the parts are all and the whole is nothing.

The market, to be sure, is a highly useful institution, and humans can use nature only by dividing and severing. But the market has its downsides as well, not the least being its power with which it presses against opposing understandings of nature: ones that portray real, undivided landscapes; that see interconnections and interdependencies; and that are informed by ecology, aesthetics, and ethics. Just as bad are market methods of valuation, which take into account only value that an individual owner can capture and enjoy, without significantly sharing with others. By this measure, the vast majority of species are valueless, however indispensable ecologically. Ecosystem functions and processes, which cannot be captured or used exclusively: they, too, are worthless in market terms.

In some manner, the market’s corrosive messages need to be contained and their ill effects mitigated by understandings of nature that are ecologically and ethically sound. For this reason, those who propose to go even further in dividing nature into private shares,³⁸ conceptually (if not physically) severing even more of nature’s interconnections, need to understand that they are strengthening cultural understandings that play key roles in facilitating degradation.³⁹

Simplifying Nature. Just as law cannot get by without simplifying, so too humans could not live in the natural

31. See Fred Bosselman, *Four Land Ethics: Order, Reform, Responsibility, Opportunity*, 24 ENVTL. L. 1439 (1994).

32. See *Owning the Land*, *supra* note 15, 297-303 (noting that property regimes based on community sentiment can vary widely, and may or may not promote healthy landscapes).

33. BOUNDED PEOPLE, *supra* note 15, ch. 9; JUSTICE AND THE EARTH, *supra* note 17, ch. 2; Eric T. Freyfogle, *The Tragedy of Fragmentation*, 32 ELR 11321 (Nov. 2002) [hereinafter *Tragedy of Fragmentation*]; *Owning the Land*, *supra* note 15; *Ethics, Community, and Private Land*, *supra* note 15.

34. “The welfare of the people is the supreme law.” This influential common-law principle is considered in a highly useful study, WILLIAM J. NOVAK, *THE PEOPLE’S WELFARE: LAW & REGULATION IN NINETEENTH-CENTURY AMERICA* (1996) [hereinafter *THE PEOPLE’S WELFARE*]. See GREGORY S. ALEXANDER, *COMMODITY AND PROPERTY: COMPETING VISIONS OF PROPERTY IN AMERICAN LEGAL THOUGHT 1776-1970* (1997).

35. A SAND COUNTY ALMANAC, *supra* note 20, at viii.

36. E.g., DAVID EHRENFELD, *THE ARROGANCE OF HUMANISM* (1978); BOUNDED PEOPLE, *supra* note 15, ch. 4.

37. BOUNDED PEOPLE, *supra* note 15, ch. 4; *Five Paths*, *supra* note 5; *Illinois Life*, *supra* note 29; *Ethical Strands*, *supra* note 17; *Pilgrim Leopold*, *supra* note 18; Eric T. Freyfogle, *Local Value*, TERRA NOVA, Spring 1996, at 29; Eric T. Freyfogle, *Should We Green the Bill?*, 1992 U. Ill. L. Rev. 159.

38. This line of reasoning is a centerpiece of the subset of libertarian thought that terms itself “free market environmentalism.” E.g., TERRY L. ANDERSON & DONALD R. LEAL, *FREE MARKET ENVIRONMENTALISM* (rev. ed. 2001). Though it draws extensively (and selectively) upon economic models, this line of thought at bottom is rooted in political libertarian theory, and hence in practice (far more than in theory) tends to resist even environmental protection measures that improve the efficiency of market processes.

39. BOUNDED PEOPLE, *supra* note 15; *The Price of a Sustainable Environment*, DISSENT, Spring 1998, at 34; *Water Rights and the Common Wealth*, 26 ENVTL. L. 27 (1996) [hereinafter *Water Rights*].

world if they had to take into account, before acting, all of the natural impacts of what they planned to do. Inevitably, nature must be simplified into easily grasped understandings, which is what humans have always done and always will do. But simple images of humans-in-nature can take many forms, some far better than others. The free market, of course, supplies one set of simple understandings, and they are for the most part damaging. The institution of private property provides another suite of simple images, which similarly exalt nature's parts and discount interconnections.

Given the power wielded by these and related cultural images it is essential that they be as sound as possible, ecologically and ethically. At a minimum, scholars who talk about landed property rights and about the market's proper roles should be taking them into account. Rhetoric counts, and the ways private land is talked about can wield great influence. Not surprisingly, conservation writers such as Leopold and Berry have made the subject a central element of their advocacy, urging views of ownership that portray owners, not as autonomous entrepreneurs, but as community members with duties to help sustain the larger whole.⁴⁰

Ongoing Trends. Because so many property scholars think of property law as essentially static—and give far too much weight, I believe, to common-law ideas—they infrequently distance themselves from what has gone on over the past 30 or 50 years to gain a sense of dominant trends. Laws such as the wetlands protection provision of the Clean Water Act⁴¹ are viewed in isolation, as disruptions of private rights, rather than (as I think they should be) as clues to a new understanding of what it means to own land.

Ongoing trends are notoriously hard to describe as they unfold. Still, key trends today are discernible in general outline, in part, ironically, because they are so strongly resisted. One trend: the land itself is playing a small but growing role in defining landowner rights, so that rights to use a wetland are not the same as rights in a dry land; rights to use a sloping hillside are not the same as rights in flat fields; rights to alter vegetative communities are depending in small part on whether endangered species reside there. Nature is coming back into the picture. A second trend: ecological degradation is being identified as a form of land use harm, including degradation that comes about, not because given land uses are harmful in isolation, but because harm arises when too many landowners decide to act in a particular way. In a key step, even land degradation that does not cross property boundaries is becoming suspect. A third trend: landowner rights to develop are being curtailed, so much so that the right to develop is becoming an insecure entitlement, especially in the case of lands already devoted to an economic use.

These three are among the most important trends unfolding today. A key issue now on the table: how to reconceive a landowner's right to develop vacant land, given the strong

understanding that growth needs controlling. To use tax money to compensate every landowner barred from development would be grossly unfair to taxpayers and utterly inconsistent with property's underlying justification. On the other hand, to allow the few to reap big gains from development while other owners are left empty-handed is to impose unfairness within the ranks of landowners themselves. My own view is that the right to develop vacant land might properly be redefined as a right instead to participate fairly in the economic benefits of regional development, together with the owners of ecologically similar lands. Under this approach, some owners would be allowed to develop, others would not, but all would share in the resulting gains.⁴² The upshot: landowners whose actions give rise to conservation needs would bear the costs of the conservation.

Given the wide variety of private ownership schemes employed by different cultures, scholars today ought to be able to devise ownership norms that at once accommodate market needs, respect landowner privacy, and promote land health—all in ways that are fair to landowners and taxpayers alike. Why, then, are they not doing it? Several answers come to mind, not the least being the inattentiveness to detail that abstract theory can so easily induce.

Getting the Institutions Right. The achievement of landscape-scale conservation goals necessarily requires coordinated effort and scientifically grounded planning.⁴³ In many cases, such planning is best done at scales set by nature, e.g., watershed scale, and via processes that involve local owners. At the same time, conservation planning done on local or regional scales needs to foster the well being of landscapes at even larger geographic scales. The institutional challenges here are considerable, and admit of no easy solution. Getting local people involved is beneficial, but parochial views often discount landscape-scale issues. People hard pressed to extract a living from the land often have little luxury to contemplate its overall health and beauty. Locals also have incentives to discount problems that they cause, and they are often aided in doing so by industries that sell them products and services. Embracing local perspectives, many discount the regional and national importance of the resources that are, to them, so common. Then there is the age-old impulse to pass problems downwind or downstream. Just as markets allocate best when the prices are right, so too land planning works best when the institutions are well crafted. The work here has hardly begun.⁴⁴

The Irony of Property as Shield. Given the communitarian grounding of ownership norms it is as ironic as it is dismaying that private property has become such a potent symbol of individualism. Property has long been an exalted

40. JUSTICE AND THE EARTH, *supra* note 17, deals almost entirely with the subject of simple images of humans in nature and how they might be critiqued and refined. Berry's ideas on property are considered in BOUNDED PEOPLE, *supra* note 15, chs. 5, 7. Leopold's ideas of private ownership have not yet drawn the attention in secondary writing that they deserve. A lyrical expression of Leopold's vision of responsible land ownership is *The Farmer as a Conservationist*, in RIVER OF THE MOTHER OF GOD, *supra* note 6, at 255 (originally published 1939). On the rhetoric of owning, see BOUNDED PEOPLE, *supra* note 15, ch. 6; *Community and the Market*, *supra* note 16.

41. 33 U.S.C. §1344, ELR STAT. FWPCA §404.

42. *Community and the Market*, *supra* note 16; *Eight Principles*, *supra* note 16; *Owning and Taking*, *supra* note 15; *Owning the Land*, *supra* note 15.

43. This idea is, to no surprise, widely embraced by those who work at the landscape level to achieve communal goals. See, e.g., RUTHERFORD H. PLATT, *LAND USE AND SOCIETY: GEOGRAPHY, LAW, AND PUBLIC POLICY* (1996); TIMOTHY BEATLEY, *ETHICAL LAND USE: PRINCIPLES OF POLICY AND PLANNING* (1994). Landscape-scale planning for biodiversity is considered from various perspectives in WILDLIFE LAW, *supra* note 27, 1313-483.

44. BOUNDED PEOPLE, *supra* note 15; *Tragedy of Fragmentation*, *supra* note 33; *Putting Science in Its Place*, *supra* note 29; *Community and the Market*, *supra* note 16; *Consumption and Land Health*, *supra* note 29; Eric T. Freyfogle, *Granite Rock: Institutional Competence and the State Role in Federal Land Planning*, 59 U. COLO. L. REV. 475 (1988).

institution, linked since the early years of the republic with opportunities for families to set up subsistence farms.⁴⁵ Moreover, it has always protected individual privacy and encouraged economic initiative. Yet the main rationales for the institution have largely been community-centered: the promotion of economic enterprise, the stabilization of the social order, and the avoidance of disruptions to orderly civil rule. In theory if not always in practice, community concerns trumped individual rights, as 19th-century judges such as Lemuel Shaw so often proclaimed.⁴⁶ Today, private property is the banner most often raised by landowners eager to avoid communal duties. It has become the rationale, too, for the claim that landowners should be paid whenever they take even the most modest measures to conserve. For conservationists this trend is most disheartening.

Perhaps the key irony here, though, is not just the use of property as tool to ward off duties. It is that the property-rights banner has become so closely linked to the continued degradation of landscapes where private ownership reigns, landscapes that are fully divided into private shares and that, according to common theory, should therefore be well tended. If privatization is the cure-all for degradation of the commons, why is private ownership being used to shield misuse? Why are private owners, above all, so worried that they might one day have to change their ways?⁴⁷

* * * * *

“The oldest task in human history,” Leopold would call it decades ago, “[is] to live on a piece of land without spoiling it.”⁴⁸ Perhaps not the oldest task, not when land was plentiful, but a long-standing aspiration nonetheless and one that American culture has not yet performed well. By too many measures, Americans continue to degrade the places where they live, even as they export pollution and wastes overseas.

In his own attempt to get to the bottom of land degradation, Leopold would focus his gaze on the fragmentation of knowledge within the academy, on the tendency, even in his day, for scholars to specialize in narrow subjects and to advise landowners based solely on their narrow knowledge. It was, Leopold could tell from working in the field, a destructive and pernicious practice. Specialists had their place, but landowners could not thrive by listening merely to one or another of them. Landowners had to integrate, they had to draw upon the full range of human knowledge even while recognizing the limits of that knowledge. Done well, the job of landowner was far harder than that of university expert:

The plain lesson is that to be a practitioner of conservation on a piece of land takes more brains, and a wider range of sympathy, forethought, and experience, than to be a specialized forester, game manager, range manager, or erosion expert in a college or a conservation bureau. Integration is easy on paper, but a lot more important and more difficult in the field . . .⁴⁹

One dark December in 1935, Leopold would find himself on a trip to Germany, housed for the night in a Berlin hotel. While there he would take out a sheet of hotel stationery, turn it over, and on the back begin to organize his thoughts on the overall course of human knowledge in relation to land. Various scientific disciplines had arisen to study parts of nature. Other disciplines had emerged to study human nature, culture, and history. Each had its role, and each had made progress. Yet the land continued to suffer. The urgent need, as he saw it, was for a synthesis of all this expertise. The parts needed to come together to present a coherent vision of the whole. The land would be healthy, he concluded, only when the separate fields of knowledge achieved, as he put it, a “fusion.” Such a fusion, he predicted optimistically, was “inevitable.”⁵⁰

III. The Dying of the Mussels

At its best, law draws upon the full range of human experiences; it seeks the type of fusion that Leopold viewed as so essential. One wonders then, what benefit we might expect from a theory of property based almost entirely on neo-classical economic models, detached from the rich history of the institution, lacking a meaningful connection to nature, and discounting the vital links between ownership norms and the common good.

It was not always so. There was a time when economics was more integrated, both with other disciplines that studied land use and with actual conservation work in the field. Indeed, in the 1930s even ecologist Leopold felt himself able to contribute usefully to the literature.⁵¹ To it, he would add his essays *Conservation Economics* and *Conservation Ethics*, in which he explained the challenges of private-lands conservation as he saw them, based on his intimate knowledge of particular landscapes, their ecological ills, and the people who lived in them.⁵² For Leopold as for other writers of his day, theory emerged only after the detailed data collection was done. Even during Leopold’s day, however, economists were turning away from the natural sciences and from any serious engagement with actual landscapes. For Leopold and others close to the land, the overall cultural

50. Leopold’s writing, an unpublished fragment entitled “Wilderness,” is discussed in full in *SCA at 50*, *supra* note 18, at 10058-59. A splendid essay developing the same theme (and encouraging mainstream historians to attend far more to nature) is Donald Worster, *Paths Across the Levee*, in *THE WEALTH OF NATURE*, *supra* note 3, at 16-29.

51. Leopold’s understanding of the subject was much aided by his various dealings with prominent economists (including Richard T. Ely) who were his colleagues on the faculty at the University of Wisconsin. Leopold’s initial appointment, as the nation’s first professor of Game Management, was in the department of agricultural economics. See MEINE, *supra* note 24, at 308-31. A useful introduction to federal-level discussions of rural land-use issues at the time is TIM LEHMAN, *PUBLIC VALUES, PRIVATE LANDS: FARMLAND PRESERVATION POLICY, 1933-1985*, 5-41 (1995).

52. Aldo Leopold, *Conservation Economics*, in *RIVER OF THE MOTHER OF GOD*, *supra* note 6, 193 (originally published in 1934); *Conservation Ethics*, in *id.* 181 (originally published in 1933). Jay “Ding” Darling, then head of the Bureau of Biological Survey of the U.S. Department of Agriculture (later transformed into the U.S. Fish and Wildlife Service) applauded Leopold on his essay, *Conservation Economics*: “Your article on Economics of Conservation in the May issue of the Journal of Forestry is the finest thing I have ever read, seen or heard on the subject. It ought to make you President.” Letter from Jay N. Darling, to Aldo Leopold (Sept. 22, 1934) (on file in Leopold Papers 10-1, box 1, University of Wisconsin Archives, Madison, WI).

45. SCOTT, *supra* note 14, at 36-70.

46. See *THE PEOPLE’S WELFARE*, *supra* note 34, *passim*.

47. *The Tragedy of Fragmentation*, *supra* note 33.

48. Aldo Leopold, *Engineering and Conservation*, in *RIVER OF THE MOTHER OF GOD*, *supra* note 6, at 249, 254 (originally published in 1938).

49. Aldo Leopold, *Conservation Economics*, in *RIVER OF THE MOTHER OF GOD*, *supra* note 6, at 193, 197 (originally published in 1934).

drift was troubling. “Is the complete modern,” Leopold would ask rhetorically, “duly equipped with a social conscience, a set of new tires, a Ph.D. in economics, and a complete ignorance of the land he came from, capable of forming a stable society?”⁵³ As economics was going, so too was much of the university around him. As Leopold would observe in his influential *Almanac*:

Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system has headed away from, rather than toward, an intense consciousness of land.⁵⁴

Had he lived, Leopold likely would have been confused by the reception given the now-famous Coase Theorem, hailed by theorists as such a useful insight. Like economists after him, Ronald Coase would speak with full detachment from any particular place; he would make no use of the speech of hills and rivers. If land conservation was a concern for him, his worries did not infuse his theorem. What Leopold would wonder is how such a person could write sensibly about land without a clear vision of how it ought to be used. In Leopold’s practical view, theory was useful to the extent it helped achieve desired ends. The litmus test was always the effect on the land.⁵⁵ Leopold’s strong belief, based on decades of land-based work, was that norms of land ownership were best tested by assessing how they affected landowner behavior. Did they prompt owners to gain awareness of the natural world? Did they encourage practices that respected communal connections and that fostered land health?⁵⁶

In Leopold’s view, the ownership images of his day were defective in two key ways: they failed to proclaim that the landowner was a member of a larger community of life; and they failed to insist, morally if not legally, that the landowner act to promote the well being of that community, along with his or her own particular interest.⁵⁷ The law’s implicit messages, he knew, counted for a great deal. To speak of ownership coldly and clinically, as if ownership norms were best formulated in the abstract, was to abet unwittingly the land’s decline. Norms that lacked moral punch, he could see, would never protect the ecological whole.⁵⁸

If economists have oversold the virtues of the Coase Theorem in the land use context, they have shown even less critical judgment in the case of Garrett Hardin’s classic work, *The Tragedy of the Commons*.⁵⁹ Given the widespread evidence of private-lands degradation—witness, for instance, the billions of dollars spent annually by the Natural Resources Conservation Service to mitigate it—one wonders how anyone could take seriously Hardin’s suggestion that privatization automatically keeps land in good shape.⁶⁰ Privatization mitigates the harms that befall the open-access commons, but it hardly exerts enough force to compel sound land use overall. Even private lands need some form of Hardin’s mutual coercion mutually agreed upon. But what kind of coercion, with what penalties or rewards, and by what institutional means? The questions predated Hardin, and they remain on the agenda today.

Rather than debate the theoretical niceties of such abstractions, one wonders whether law-and-economics scholars might better turn their energies to study more attentively—and to use as paradigmatic illustrations—some of the grave problems now affecting American lands, particularly rural working lands and urban fringes. The problems there do not arise on common lands in need of dividing.⁶¹ Nor do they come because of some Coasean mix-up of property and liability rules. To start with complex, real-world conservation challenges and work backwards to their sources is to ask and explore a far different set of issues than those that one encounters in simple pollution cases. Complex cases also help show why images of land ownership carry so much weight, and why nature, understood purely in market terms, suffers so palpably today.

Take, for instance, the dying mussels in the waterways of Illinois.⁶²

Leopold’s thought), Leopold was fully aware of the magnitude of the challenge confronting conservationists who worked, as he did, in landscapes dominated by private land. Conservation measures were simply not working, and the causes were complex. In Leopold’s view, the underlying challenges were “so large and so difficult that no one individual can formulate a plan for solving them.” Help from all quarters was needed, though even then Leopold was unsure what progress could be made. He was pointed, however, in noting contemporary deficiencies: “On the average campus the most eminent economists and philosophers are commonly so devoid of understanding of conservation that their attitude can only be described as ‘unconscious.’” Leopold no doubt was unsurprised by his difficulty of getting funding for such a study; as he would note, in the concluding paragraph of his request for funding, “[a]t the present moment . . . it is easier to get help for the problems of the moon than the problems of the earth.”⁵⁹

53. Aldo Leopold, *The Role of Wildlife in Education* (Leopold Papers, 10-6, box 16, undated, Archives, University of Wisconsin-Madison).

54. A SAND COUNTY ALMANAC, *supra* note 6, at 223.

55. A classic early expression of Leopold’s practical, ends-oriented view is his letter “To the Forest Officers of the Carson,” which appeared in an internal Forest Service publication in 1913 (*reprinted in RIVER OF THE MOTHER OF GOD*, *supra* note 6, at 41). In it, Leopold emphasized repeatedly that all agency policies be judged by looking to “the effect on the Forest.”

56. The issue of how property-rights regimes affect the natural environment has become the focus of considerable work by historians, anthropologists, and others. A useful recent collection is *LAND, PROPERTY, AND THE ENVIRONMENT* (John F. Richards ed., 2002). See SUSAN HANNA & MOHAN MUNASINGHE, *PROPERTY RIGHTS AND THE ENVIRONMENT: SOCIAL AND ECOLOGICAL ISSUES* (1995); SUSAN HANNA & MOHAN MUNASINGHE, *PROPERTY RIGHTS IN A SOCIAL AND ECOLOGICAL CONTEXT: CASE STUDIES AND DESIGN APPLICATIONS* (1995).

57. *E.g.*, Aldo Leopold, *The Ecological Conscience*, in *RIVER OF THE MOTHER OF GOD*, *supra* note 6, 338 (originally published in 1947).

58. Over a period of years Leopold repeatedly but unsuccessfully sought funding for interdisciplinary, on-the-ground studies of conservation economics. *E.g.*, Aldo Leopold, *Proposed Conservation Economics Study* (Leopold Papers, 10-6, box 12, dated Nov. 7, 1938, Archives, University of Wisconsin-Madison). By the time he prepared his 1938 proposal (a highly revealing document, in terms of charting

59. 162 *SCIENCE* 1243 (1968). I have urged elsewhere that Hardin might better have termed the predicament “The Tragedy of Selfish Individualism.” *The Tragedy of Fragmentation*, *supra* note 33.

60. Among those who have dissented is land historian Brian Donahue, who views Hardin’s assertion “as so childishly simplistic as to be disingenuous.” BRIAN DONAHUE, *RECLAIMING THE COMMONS: COMMUNITY FARMS AND FORESTS IN A NEW ENGLAND TOWN* 296 (1999).

61. My sense is that the chief problem is almost the opposite: the landscapes have been excessively divided in the sense that landowners have been given too much power to use their separate pieces in isolation. The problem, that is, is one of excessive fragmentation of management powers, not a failure to fragment. See *The Tragedy of Fragmentation*, *supra* note 33.

62. A readable introduction to the story of mussels (and much more) in Illinois and surrounding areas is JOHN MADSON, *UP ON THE RIVER: AN UPPER MISSISSIPPI RIVER CHRONICLE* (1985). Information on aquatic species, including losses and current threats, is summarized in BRUCE A. STEIN ET AL., *PRECIOUS HERITAGE: THE STATUS OF BIODIVERSITY IN THE UNITED STATES* (2000); DAVID S. WILCOVE,

A century ago Illinois boasted a flourishing mussel industry, its products in demand worldwide for the manufacture of buttons. In time the advent of plastic buttons would seriously cut into the market, but the Illinois industry began fading before plastics arose. Waterways became degraded by siltation, pollution, and river traffic. Mussel harvesters wielded little political clout, and they could merely look on as their catches declined. Decades later, with concern over endangered species on the rise, aquatic biologists would inventory comprehensively the varieties and ranges of mussels in Illinois rivers, comparing them with earlier records. The results were appalling. Of all categories of wildlife mussels were the most endangered. Many species were extinct in the state, while others had suffered grave reductions in ranges. Well over one-half of all species were either gone or clearly going. Departing with them were numerous other forms of aquatic life, particularly amphibians. They, too, felt the market's heel pressing down hard.

When the Nature Conservancy in the 1990s surveyed Illinois watersheds, looking for one to study and use as a test site, it turned to the Mackinaw River, a tributary of the Illinois that flows through the farm country of the central part of the state. Except for a few tiny parcels the watershed was entirely in private hands. State and local land use regulation was insignificant. Save for a few federal laws and strings attached to federal farm subsidy programs, landowners were free to act as they pleased. Farms along the Mackinaw were devoted largely to cash-grain operations, with lands tilled annually to control weeds and to prepare fields for planting. Decades earlier, before the coming of chemical fertilizers and herbicides, many fields had been used as pastures or hayfields—lands with permanent cover that retained soil, slowed runoff, and supplied valuable wildlife habitat. But the chemical and industrial transformation of farming ushered in their demise, increasing in the process both soil erosion and pollution in the process. Annual grains brought higher incomes, so pastures and hayfields disappeared, taking huge numbers of grassland birds and related life with them. To get farm equipment into the fields early enough in the spring, fields were underlain with tile drainage systems, which sped the flow of water after rains. Widespread drainage created harder, faster waterflows, causing downstream flooding, streambank erosion, and riparian degradation. It also exacerbated late-summer droughts. Hydrologic changes matched with vast increases in tillage gave rise to heavy silt loads in waterways, along with increasing chemical runoffs. For many forms of aquatic life—particularly the mussels, who had no way to move—the combination was deadly.

The story of the Mackinaw is hardly an exception, not in the grain belt of the Midwest. If it varies from other watersheds, it does so only in details. When the mussels of Illinois flourished, they served as the base of both a complex biotic

community and a local export industry. But to the booming agribusiness companies and their rapidly growing farm customers, the mussels were invisible. Drain lines were laid, pastures plowed, fields sprayed with chemicals, fencerows removed, natural fertility cycles disrupted, and the landscape as a whole greatly transformed, all in direct response to the signals from the market. Year by year, aquatic species would suffer. In picking the Mackinaw the Nature Conservancy was attracted to its comparatively high level of biological diversity. But “high level” by then did not mean pristine. Indeed, the river had lost one-fourth of its fish and mussels species just since the 1950s, largely if not entirely because of farm practices. And many more species were poised to follow. When asked about what the river had been like in their youth, elder residents would turn glum. It had been a much prettier river then, they related—more full of life, more enjoyable to use, a good place for fishing and trapping. Times had plainly changed. And it was not just the aquatic life that showed the change. Stream banks up and down the river showed major cave-ins, with entire floodplain forests damaged by unnatural flooding. Even with levees raised several times during the century, farm fields were still flooding with crops destroyed, including fields that have never flooded before.

What might we make of a tale such as this? What accounts for the degradation, and how might it be reversed?

The most influential organization operating in the Mackinaw watershed is the Illinois Farm Bureau, firmly entrenched as the voice of large-scale agribusiness. With its massive investments in chemical companies, equipment dealers, and farm insurance, it takes ardent interest in the continuation of high-tech farming, American-style, on as many acres as possible.⁶³ Though outwardly supportive of conservation measures—so long as they are entirely voluntary—the Illinois Farm Bureau works hard behind the scenes to gut organized efforts to improve the condition of the land. By far its most energetic efforts are reserved for those occasions when anyone, anywhere suggests that farmland owners should be held accountable for problems such as those afflicting the Mackinaw. The bureau's defensive arguments are many, including its free use of even junk science to discount all claims of harm. Yet in the end its primary weapon is purely legal: to hold farmers accountable in any way would violate their private property rights. To own land is to have the right to farm it in whatever way makes money, and that is precisely what Mackinaw farmers are doing and feel compelled to do. In any event, the bureau urges, conservation work benefits the community at large. If the community receives the benefit, the community ought to pay.

In time the Nature Conservancy would prepare detailed studies of the Mackinaw, aided by landowners whose hostility gradually diminished as they realized that their local problems were, in fact, severe and that the Nature Conservancy was the tamest of conservation groups. Demonstration projects arose to show farmers how to rebuild wetlands and restore riparian vegetation. Calculations were made

THE CONDOR'S SHADOW: THE LOSS AND RECOVERY OF WILDLIFE IN AMERICA 106-08 (1999). Information on Illinois waterways is contained in ILLINOIS DEPARTMENT OF NATURAL RESOURCES, THE CHANGING ILLINOIS ENVIRONMENT: CRITICAL TRENDS, TECHNICAL REPORT OF THE CRITICAL TRENDS ASSESSMENT PROJECT VOL. 2: WATER RESOURCES (rev. ed. 1999). Background on the Mackinaw project of The Nature Conservancy is set forth in BOUNDED PEOPLE, *supra* note 15, ch. 9. See also THE NATURE CONSERVANCY OF ILLINOIS, MACKINAW RIVER WATERSHED MANAGEMENT PLAN (1998); THE NATURE CONSERVANCY OF ILLINOIS, ENSURING CITIZENS HAVE A VOICE: A GUIDE TO WATERSHED MANAGEMENT PLANNING BASED UPON THE EXPERIENCES OF THE MACKINAW RIVER PROJECT (1998).

63. A scathing critique of the American Farm Bureau Federation is presented in VICKI MONKS ET AL., AMBER WAVES OF GAIN: HOW THE FARM BUREAU IS REAPING PROFITS AT THE EXPENSE OF AMERICA'S FAMILY FARMERS, TAXPAYERS, AND THE ENVIRONMENT (2000). Useful historical perspectives are offered in RICHARD HOFSTADTER, THE AGE OF REFORM: FROM BRYAN TO F.D.R. 23-59, 94-130 (1955); GRANT MCCONNELL, THE DECLINE OF AGRARIAN DEMOCRACY (1953).

about needed cutbacks in overall subsurface drainage so that flooding and streambank erosion might be reduced. Having done that, though, the Nature Conservancy's effort largely came to a halt. The problems by then were clear, as were the underlying causes. But who was to pay for the changes? Not the farmers: they were merely exercising their property rights, playing the market game that had kept them afloat. In any event, they could not afford to remedy the problem. With prices so low, even modest reductions in tillage or drainage appeared suicidal.

To make sense of the Mackinaw's decline one needs to step back from the day-to-day activities. One needs to think clearly about why people there use land as they do and why they have so resisted recognizing and remedying their watershed's ill health. Admirers of Hardin's classic article might point out that the river remains a commons, as in a sense it does. But harms do not arise because of the ways people intentionally use the river, not in anything like the sense that Hardin meant. They come from bad land use practices; harms to the river are only incidental.⁶⁴ What is called for is not some articulation of river use rights: it is to restrain the ways people use their lands by taking into account how their lands are connected ecologically. As farmers see matters they are not using the river, they are simply using the lands that they own. The harm has just happened.

It hardly need be said that the Mackinaw tale includes no private negotiations involving cash payments, at least so far as the record reveals. Downstream landowners at times have complained about the flooding, but what can they do? Upstream landowners apparently have the legal right to do what they do.⁶⁵ Plus, the flooding has not been caused by a single, bad-acting upstream farmer. It has arisen because too many landowners drain too many acres. In such a case, who is to blame? Liability aside, downstream owners have each lost only a handful of acres to flooding or collapsing streambanks; none has nearly enough money at stake to justify extensive litigation.⁶⁶ If legal authorities refuse to take action, nothing can or will be done.

64. As a practical matter, it would be exceedingly difficult to translate reasonable land use restrictions into river use rights, and even more difficult thereafter to measure and monitor compliance with limits. Moreover, harms to the river itself are not the only ill effects of the bad land use practices in the watershed; the ecological effects are felt in many ways, on soils, biodiversity, and the like. The overriding need is for land practices that make sense ecologically. Damage to the river is simply the most visible form of ongoing degradation.

A useful comparison here might be with laws restricting landowners from draining or filling wetlands, which are widely understood as regulations of land use activities. Such a law could be written instead to state that landowners are free to alter their lands as they see fit so long as they leave unaffected the hydrology of adjacent lands, and with essentially the same effect: landowners would have no ability to drain or fill, given that any such activity would affect water regimes on adjacent lands. Would such a law no longer be a land use regulation? Would libertarian advocates suddenly switch sides, and decide that wetlands protection laws do not curtail private property rights in land, but merely allocate rights to use adjacent waters?

Fully consistent with my comments here, however, would be a program in which landowners hold transferable drainage rights that they might use or sell. Such a program if carefully drawn, might usefully employ market mechanisms to achieve low cost ways of accomplishing communally set goals.

65. If not under state drainage law then by way of the law of prescriptive easements, which like so much U.S. law is aimed at resolving disputes among neighboring landowners but which does so without regard for impacts on ecological health.

66. Another reality restraining action is that those harmed might well be embracing the same harmful practices, perhaps imposing harm themselves on owners further downstream.

In thinking about the Mackinaw, simplistic answers simply will not do. Part of the overall predicament has to do with the ways landowners in the watershed see the river and value it. For most of them the river is little more than a sewer, valueless in market terms and hence, one suspects, of little concern. Prevailing images of ownership encourage owners to think of their lands as isolated tracts. Boundary lines establish not just limits on tillage but limits on responsibility as well; what happens on someone else's land is of little concern. Then, too, there is the matter of farming as a business, a ruthlessly competitive one that puts enormous pressure on operators to cut costs. So competitive is the climate that dealings among farmers have deteriorated, particularly as they compete to find still more acres to rent so that they can make more efficient use of their massive machines. With farm operations now routinely exceeding 1,000 acres per farm, few farmers own all or even a substantial part of the land that they tend. Tenancy is widespread, and while tenants can enjoy long-term relations with particular owners, planning horizons rarely extend beyond a few decades—certainly short enough so that soil erosion, for instance, can be ignored, as well as ecological problems caused by inputs such as genetically modified seed.

Far more could be said about the causes of the Mackinaw's decline. Free trade would be part of the story, as would the pernicious messages conveyed by government conservation programs that routinely pay farmers for even modest conservation practices, thereby proclaiming that to own is to shoulder no conservation duty. A key piece of the story would be the way information about environmental issues reaches farmers: much of what they hear comes through the agribusiness press, including the Illinois Farm Bureau's weekly, which slants stories so as to discredit allegations of environmental decline and which regularly mischaracterizes and ridicules conservation organizations.

The story, then, is complicated, and the causes of the Mackinaw's continued decline are many. And yet there is one element of the tale which rises so powerfully that it should not, in fairness, be overlooked.

When one surveys the values and understandings that shape industrial farm operations along the Mackinaw, it is striking what model citizens these farmers are. Model citizens, that is, by the standards that pertain in Theory World.⁶⁷

Farmers along the Mackinaw look to the market to tell them what to do; indeed, some track market developments multiple times a day. What the market values, they value in their operations; what the market ignores, they feel free to ignore. Nature comes in fragmented pieces, the vast majority of which are worthless. And to deal with the parts that are worse than worthless, ubiquitous chemical companies have potent products to sell. Private property is exalted and respected; as for restrictions on private rights, no one raises the possibility.

To residents of the Mackinaw the land appears in fragmented terms, as discrete parcels of land, with little regard for the ebb and flow of life that might cross all-important boundaries. Externalities are ignored unless outside pressures compel consideration. Under prevailing images of

67. Even model citizens, of course, can have their limitations. In the case of Mackinaw residents it is, most evidently, their unwillingness to negotiate with neighbors and to transform neighborly interactions into cash payments. Though cultural attitudes no doubt account for much of this unwillingness, practical factors are also present. See *supra* note 66 and accompanying text.

ownership landowners are free to do as they wish, which means that landowners should rarely if ever be questioning what their neighbors do. Humans alone count ethically, and the land is a mere object—a “platform,” to use the common expression—on which miracle plants are produced. As for conservation, any outsider who wants to promote it had better come with money in hand. Withal, competition reigns and operators search constantly for ways to cut costs. If past trends continue—and most everyone thinks they will—the

next year will see fewer farmers and the year after that fewer still.

It is, in short, a hard-working, income-focused place, where people look after themselves, the bottom line counts, and sentiment can lead to financial ruin.

As for the dying mussels, smothered with silt from eroding fields and crumbling streambanks, few seem to take note.

After all, it is the age of plastics.