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# WATER RIGHTS AND THE COMMON WEALTH

By  
ERIC T. FREYFOGLE\*

*Many observers look to water marketing as the primary tool to meet new needs for water in the West and to bring an end to the most environmentally damaging water uses. In this provocative Essay, Professor Eric Freyfogle takes issue with this view, on grounds of economics, ecology, and ethics. Because of externalities and other systemic flaws, he argues, water markets offer little promise of bringing about efficient water-use practices. As importantly, market reasoning perpetuates the misguided view that nature is merely a collection of resources, existing chiefly to serve human needs and easily shifted from place to place. Because it sanctions such ecologically damaging water uses, prior appropriation law now faces a mounting crisis of moral legitimacy. To deal with that crisis and bring water law up to date, lawmakers must put meaning into the beneficial-use requirement; they must insist that water users become responsible members of the natural and human communities of which they are a part.*

Despite a century and a half of opportunity and mounting need, the dominant culture of the American West has not yet adapted to the West's defining physical feature—its aridity. Variable overall yet profound in many places, aridity marks the West as a land different from the humid East, and different too from England, the well-watered home of American legal culture.<sup>1</sup> As English-speaking settlers came to the West's dry places, they re-created ways of life that they knew, ways of life based on the assumption of plentiful clean water. When water ran short, as it did quickly and often, nature was pushed hard to furnish more.<sup>2</sup> Ditches, dams, and reservoirs soon notched the West, followed in time by deep shafts, pumps, and pipelines. Irrigation was able to make the desert bloom in alfalfa, cotton, corn, lawns, and golf courses, but it did so only at the heavy cost of

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The initial version of this Essay was delivered in June 1995 at a conference on water rights sponsored by the Natural Resources Law Center at the University of Colorado School of Law. My thanks to David Getches for suggesting the topic and inviting me to address it.

<sup>1</sup> For a classic introduction to the West's aridity and the troubles that all but a few Americans had in coming to grips with it, see generally WALLACE STEGNER, *BEYOND THE HUNDREDTH MERIDIAN: JOHN WESLEY POWELL AND THE SECOND OPENING OF THE WEST* (1954).

<sup>2</sup> See, e.g., CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST* (1992).

depleted rivers, declining fisheries, salinized waterflows, salt-crusted soils, and altered ecosystems.<sup>3</sup>

Until a few decades ago, Western water was freely available for the taking, chiefly under the rules of prior appropriation.<sup>4</sup> The act of appropriation gave rise to a water right, a form of private property recognized and protected by law. Early users faced only the minimal duty to avoid egregious waste, a standard easily satisfied even by unlined irrigation ditches, unmetered municipal water systems, and groundwater pumping in excess of recharge rates.<sup>5</sup> Users could continue seizing water so long as a single drop remained in the stream or aquifer: No minimum stream flows were maintained; no planning for future needs took place.<sup>6</sup> Looking back today, it is painfully clear that the law allowed too much water to pass into private hands. Too little water was left in rivers to sustain aquatic life, to maintain riparian corridors, and to meet recreational and aesthetic needs.<sup>7</sup>

This legacy of overappropriation now confronts makers of Western water policy. Major shifts are needed in water-use patterns, principally shifts from water uses that benefit individual owners to uses that directly

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<sup>3</sup> For historical perspectives of water use in the West, see DONALD WORSTER, *RIVERS OF EMPIRE: WATER, ARIDITY, AND THE GROWTH OF THE AMERICAN WEST* (1985) [hereinafter WORSTER, *RIVERS OF EMPIRE*]; MARC REISNER, *CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER* 14 (1986); DONALD WORSTER, *THE WEALTH OF NATURE* 123-34 (1993) [hereinafter WORSTER, *THE WEALTH OF NATURE*]. For a good survey focusing on the present, see FRED POWLEDGE, *WATER: THE NATURE, USES, AND FUTURE OF OUR MOST PRECIOUS AND ABUSED RESOURCE* 9-10 (1982); NATIONAL RESEARCH COUNCIL, *IRRIGATION-INDUCED WATER QUALITY PROBLEMS: WHAT CAN BE LEARNED FROM THE SAN JOAQUIN VALLEY EXPERIENCE* 119 (1989).

For examples of the continued tenacity of old ways of thought, see CLYDE O. MARTZ, *Natural Resources Law: An Historical Perspective*, in *NATURAL RESOURCES POLICY AND LAW: TRENDS AND DIRECTIONS* 21 (Lawrence J. MacDonnell & Sarah F. Bates eds., 1993); Gregory J. Hobbs, Jr., *Ecological Integrity, New Western Myth: A Critique of the Long's Peak Report*, 24 ENVTL. L. 157 (1994).

<sup>4</sup> For a consideration of the elements of prior appropriation, see A. DAN TARLOCK, *LAW OF WATER RIGHTS AND RESOURCES* ch. 5 (1995).

<sup>5</sup> See, e.g., *Middlekamp v. Bessemer Irrigating Ditch Co.*, 103 P. 280, 281-82 (Colo. 1909) (no duty to line ditch). The common approach in determining whether a use is beneficial is one of community custom, regardless of how wasteful or inefficient a use might be. See Steven J. Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483, 483-91 (1982). Even today, as Professor Tarlock notes, "[c]ourts have occasionally found that large uses of water that produce modest returns in proportion to the quantity of water applied are nonbeneficial, but the doctrine has not been a major mechanism to curb waste." TARLOCK, *supra* note 4, § 5.16[3][a].

<sup>6</sup> See TARLOCK, *supra* note 4, § 5.05[2] (noting that 1) water is typically available for appropriation if it is physically present in a normal water year, even if in drier years the water source is completely dry, and 2) most states do not sum up permitted water appropriations to determine whether additional water is available for appropriation).

<sup>7</sup> For good assessments of Western water shortages, see generally WILKINSON, *supra* note 2; SARAH F. BATES ET AL., *SEARCHING OUT THE HEADWATERS: CHANGE AND REDISCOVERY IN WESTERN WATER POLICY* (1993) (giving an historical and contemporary analysis of the West's dependency on water); MARC REISNER & SARAH BATES, *OVERTAPPED OASIS: REFORM OR REVOLUTION FOR WESTERN WATER*, 22, 44 (1990).

sustain the health of natural and human communities.<sup>8</sup> But can these shifts occur, given that so many water flows are fully claimed by private owners? Can they occur without tinkering with, if not altering greatly, the privileges enjoyed by current water rights holders? Put simply, are private water rights consistent with the common wealth?

Advocates of private property and open markets propose two methods for bringing about the much-needed shifts in water-use practices: voluntary market transfers of water rights and government purchases.<sup>9</sup> The reasoning behind this popular position is four-fold. First, the main virtue of a free market is its ability to guide valuable things to their highest and best uses. As alternate resource uses fluctuate in value over time, the market provides a low-cost, quick-acting way of bringing about transfers. When the market works well, resources end up shifting to higher valued uses, and the lowest valued uses come to an end.

Second, people today value certain water uses more than they used to, particularly instream flow uses for fishing, recreation, ecological integrity, aesthetics, and the like. When allowed to function, the market can meet these new uses. Those who value them can purchase the water they want from low-valued uses, and the change will occur.

Third, some new needs for water are so peculiarly public that no private group is likely to step forward and buy the water needed to meet the needs. In such instances, tax money should be used to bring about the

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<sup>8</sup> See JOHN A. FOLK-WILLIAMS ET AL., *WATER IN THE WEST: WESTERN WATER FLOWS TO THE CITIES* 6-16 (1985); see generally *WESTERN WATER MADE SIMPLE* (Ed Marston ed., 1986); Charles F. Wilkinson, *Western Water Law in Transition*, 56 U. COLO. L. REV. 317 (1985); George A. Gould, *Conversion of Agricultural Water Rights to Industrial Use*, 27B ROCKY MTN. MIN. L. INST. 1791 (1982).

<sup>9</sup> Some commentators doubt the efficacy of free market transfers in dealing with water shortages. See, e.g. Harrison C. Dunning, *Reflections on the Transfer of Water Rights*, 4 J. CONTEMP. L. 109, 109-10 (1977) (summarizing and partially critiquing the view that market transfers of water rights are necessary to change water use practices). Others call directly for a market transfer system. See TERRY L. ANDERSON, *WATER CRISIS: ENDING THE POLICY DROUGHT* 76-78 (1983); L.M. HARTMAN & DON SEASTONE, *WATER TRANSFERS: ECONOMIC EFFICIENCY AND ALTERNATIVE INSTITUTIONS* (1970); CHARLES J. MEYERS & RICHARD A. POSNER, *MARKET TRANSFERS OF WATER RIGHTS: TOWARD AN IMPROVED MARKET IN WATER RESOURCES* 47-49 (1971); H. Stuart Burness & James P. Quirk, *Water Law, Water Transfers and Economic Efficiency: The Colorado River*, 23 J.L. & ECON. 111 (1980); Charles W. Howe et al., *Innovative Approaches to Water Allocation: The Potential for Water Markets*, 22 WATER RESOURCES RES. 439 (1986); Ronald N. Johnson et al., *The Definition of a Surface Water Right and Transferability*, 24 J.L. & ECON. 273 (1981); Stephen F. Williams, *A Market-Based Approach to Water Rights: Evaluating Colorado's Water System*, in *TRADITION, INNOVATION AND CONFLICT: PERSPECTIVES ON COLORADO WATER LAW* 107, 125 (Lawrence J. MacDonnell ed., 1986). For a more general consideration, see Lawrence J. MacDonnell & Teresa A. Rice, *Moving Agricultural Water to Cities: The Search for Smarter Approaches*, 2 WEST-NORTHWEST 27 (1994); see also Terry L. Anderson & Donald R. Leal, *Free Market Versus Political Environmentalism*, 15 HARV. J.L. & PUB. POL'Y 297 (1992); Charles W. Howe, *Water as an Economic Commodity*, in *WATER AND THE AMERICAN WEST: ESSAYS IN HONOR OF RAPHAEL J. MOSES* 53 (David Getches ed., 1988); Brian E. Gray, *A Primer on California Water Transfer Law*, 31 ARIZ. L. REV. 745 (1989); Jerome W. Milliman, *Water Law and Private Decisionmaking: A Critique*, 2 J.L. & ECON. 41 (1959); Zach Willey, *Behind Schedule and Over Budget: The Case of Markets, Water, and Environment*, 15 HARV. J.L. & PUB. POL'Y 391 (1992).

transfers, either through purchases on the open market or by way of condemnation.<sup>10</sup>

Finally—and, for many proponents, most centrally—all of this can occur without tampering with now-vested water rights or with the idea of private property rights in water flows.

Is this reasoning persuasive when applied to the Western land and its people? Can the market bring about major shifts in water-use practices so as to help rehabilitate natural ecosystems? Is it possible for the natural order to be healthy when a component as indispensable as water is subject to the logic, and the laws, of private property?

### I.

Like all markets, a water market provides accurate price signals only if the market works efficiently. Water markets, however, face serious limitations because of the peculiar nature of water and its complex ecological roles. Indeed, so pronounced and so fundamental are its inefficiencies that a water market can do only a little—and so far has done little—to bring about sensible resource reallocations.<sup>11</sup> Many of the inefficiencies have to do with imperfect information, transaction costs, and inadequate numbers of willing buyers and sellers. The chief culprit, though, is that of externalities.<sup>12</sup> In market theory, externalities are viewed as minor problems, best dealt with by internalizing them (assuming they are sizeable enough to worry about in the first place). But this simply is not so in the case of

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<sup>10</sup> Not all advocates of water markets are willing to agree that governments have a legitimate role in bringing about ecological well being. Some are sufficiently infused with libertarian fervor and radical idealism as to portray virtually all government actions as evil, while overlooking the manifest flaws of the market, including its dramatic undervaluation of public goods. See, e.g., TERRY ANDERSON & DONALD LEAL, *FREE MARKET ENVIRONMENTALISM* (1991). As Professor James Krier notes, however, it is not possible to have a functioning, efficient market in natural resources without substantial governmental involvement in defining, initially allocating, and policing those rights; it is by no means clear why this governmental involvement is not as tainted and repulsive to libertarians as any other governmental action. James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL'Y. 325, 332-33 (1992); see generally Michael C. Blumm, *The Fallacies of Free Market Environmentalism*, 15 HARV. J.L. & PUB. POL'Y. 371 (1992) (critiquing the more obvious deficiencies of Anderson and Leal's work).

<sup>11</sup> Some of the problems with water transfers and markets are considered in NATIONAL RESEARCH COUNCIL, *WATER TRANSFERS IN THE WEST: EFFICIENCY, EQUITY, AND THE ENVIRONMENT* (1992); BONNIE COLBY SALIDA & DAVID B. BUSH, *WATER MARKETS IN THEORY AND PRACTICE* (1987); U.S. GEN. ACCOUNTING OFFICE, *WATER TRANSFERS: MORE EFFICIENT WATER USE POSSIBLE, IF PROBLEMS ARE ADDRESSED* (May 1994); Eric T. Freyfogle, *Water Justice*, 1986 U. ILL. L. REV. 481; Lawrence J. MacDonnell, *Transferring Water Uses in the West*, 43 OKLA. L. REV. 119 (1990). Many of the sources in note 9, *supra*, also consider the problems that beset the processes of selling and transferring water.

<sup>12</sup> For general discussions of the importance of externalities, see Arthur J. Jacobson, *Environmental Accountability Beyond Compliance: Externalities and Accounting*, 12 CARDOZO L. REV. 1333 (1991); NATIONAL RESEARCH COUNCIL, *supra* note 11, at 38-69; see also Douglas R. Williams, *Valuing Natural Environments: Compensation, Market Norms, and the Idea of Public Goods*, 27 CONN. L. REV. 365 (1995) (surveying the difficulties of developing alternative valuation methods). I include the "tragedy" of the open-access commons as a particular form of the externalities problem.

water, which is an essential part of an integrated natural community. External costs and benefits are of critical importance, varying from place to place and time to time.<sup>13</sup> In many settings, the external impacts of a water use are greater than the internal ones.<sup>14</sup>

Beyond the sheer quantitative importance of externalities, the market's way of internalizing impacts is by paying money to the person harmed.<sup>15</sup> In the case of water, however, many external harms affect ecosystems and future generations, or are otherwise uncertain in scope and infeasible to calculate or trace. Paying money shifts dollars around among people, but does nothing to reinvigorate the land's health except insofar as it deters harmful conduct in the future. As it now operates, water law largely ignores external harms associated with water uses,<sup>16</sup> and therein lies its flaw. Even if water users were required to pay for the direct, traceable impacts of their uses—a process that could come about, it should be noted, only by way of a major redefinition of private rights—the land would continue to suffer.

Externalities are no small problem under market theory. When externalities loom large and go unremedied, market allocation methods are flawed, sometimes so severely that their very legitimacy is in doubt.<sup>17</sup>

A related assumption in water-rights logic is that, like other commodities, water is transferable, sufficiently so to give rise to a functioning market. A market works with tolerable efficiency only if enough buyers and sellers are present. In the case of water, however, there are problems on this front. The assumption that water is smoothly transferred, from place to place and use to use, is an idea firmly grounded in a pre-ecological era; it is an idea that makes sense only in a realm of economic theory detached from any real waterway or watershed. When we put down the Economics book and wander into the real world, in all its richness and complexity, what we find is that every detail of a given water use has peculiar ecological impacts—where the water is withdrawn, when it is withdrawn, where it is used, how it is used, whether and how long it is stored, and in what way and by how much it is polluted. In the abstract, a water flow is a

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<sup>13</sup> These external costs and benefits are usually referred to as "third party impacts," see, e.g., NATIONAL RESEARCH COUNCIL, *supra* note 11, a terminology that perpetuates the questionable assumptions that only humans count and that humans are best understood as discrete individuals.

<sup>14</sup> The obvious examples are water uses that pollute heavily or drain waterways so thoroughly that ecological communities and nonconsumptive human uses are seriously harmed. In much of the West, irrigated agriculture produces net incomes that are little more (if not less) than the government subsidies that they entail, which means that even modest pollution can entail external harms that exceed benefits.

<sup>15</sup> Eric T. Freyfogle, *Ownership and Ecology*, 43 CASE W. RES. L. REV. 1269, 1282-83 (1993).

<sup>16</sup> This statement is less true for newly initiated uses today that must undergo public interest reviews to consider external harms, but it remains accurate as a summary of all Western water uses. See Douglas L. Grant, *Public Interest Review of Water Rights Allocation and Transfer in the West: Recognition of Public Values*, 19 ARIZ. ST. L.J. 681, 702 (1987) (examining how public interest review is evolving to recognize public values).

<sup>17</sup> For a brief introduction to the severe flaws in markets for environmental goods, see generally Blumm, *supra* note 10.

water flow; it is the fungible widget of microeconomic theory. In real life, the matter is much more complicated.<sup>18</sup>

Instructively, trading water is like trading employees. Like water, labor is a business input, and businesses can and do shift employees from place to place. But water and labor are special kinds of inputs; they are special in ways that distinguish them from steel rods or hamburger buns or software programs. Employees come embedded in local communities; they have spouses that work, children in school, homes that they own, friends and attachments and local people who depend on them. A company can undertake to move its labor input from one place to another, but it needs to recognize that only part of that input will transfer. Even then, transfer costs will be high.

Water flows are every bit as communally embedded as employees—in water's case, embedded in the natural community that includes the soils, plants, animals, microorganisms, nutrient flows, and hydrological cycles.<sup>19</sup> When a water flow is diverted for use in a new location, the impacts spread well beyond the transferring water owner. The surrounding community is inevitably affected whenever a given water use is ended and a new one begun. The change might prove ecologically beneficial—as when more or cleaner water is allowed to remain in the river. Just as easily it can cause ecological harm by further disrupting instream values. But whether for good or ill, the effects of the change are typically widespread. Water law today goes part way toward recognizing this interdependence of water use and local community, conditioning water transfers on rules and processes that pay attention to junior water users and the public interest at large.<sup>20</sup> But the more protection that these processes provide for junior

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<sup>18</sup> See NATIONAL RESEARCH COUNCIL, *supra* note 11 at 8 (demonstrating how current law fails to consider the consequences of shifting water flows to new uses in new locations and calling for greater sensitivity to these third-party impacts that include greater involvement by third parties in the transfer process). Although noting that third-party protections impede water transfers and raise transaction costs, the National Research Council nonetheless calls for increased reliance on water marketing to alter destructive water use practices. *Id.* at 34.

<sup>19</sup> See, e.g., Joseph L. Sax, *Understanding Transfers: Community Rights and the Privatization of Water*, 1 WEST-NORTHWEST 13, 13 (1994) (arguing for community water rights); see also Michael B. Metzger, *Private Property and Environmental Sanity*, 5 ECOLOGY L.Q. 793, 797 (1976) (commenting on property rights and the implications of ecological interdependence).

<sup>20</sup> For a good summary of the processes involved in water transfers, see Bonnie G. Colby et al., *Procedural Aspects of State Water Law: Transferring Water Rights in the Western States*, 31 ARIZ. L. REV. 697 (1989); see also George A. Gould, *Recent Developments in the Transfer of Water Rights*, in WATER LAW: TRENDS, POLICIES, AND PRACTICE 93 (Kathleen Marion Carr & James D. Crammond eds., 1995) (discussing the increased interest in water marketing); George A. Gould, *Water Rights Transfers and Third-Party Effects*, 23 LAND & WATER L. REV. 1 (1988) (examining third party effects and their impact on water rights transfers); Grant, *supra* note 16 (arguing for public interest review); TARLOCK, *supra* note 4, § 5.07[2] (discussing other legal limits on the transfer of appropriative rights, including rules that affix water rights to the land where the water is used); Lawrence J. MacDonnell & Charles W. Howe, *Area-of-Origin Protection in Transbasin Water Diversions: An Evaluation of Alternative Approaches*, 57 U. COLO. L. REV. 527 (1986) (discussing rules that limit the export of water away from the area of origin as variously defined); For an explanation and economic defense of the protections for junior users, see MEYERS & POSNER, *supra* note

right holders and instream-flow values—and they need to be more protective than they already are<sup>21</sup>—the more difficult it becomes for an owner to transfer water, and thus the more embedded the water becomes in a given place for a given use.<sup>22</sup> Human owners of the water might come and go, but the water stays, locked into historic uses that, as often as not, are inefficient and ecologically damaging.<sup>23</sup>

These first two assumptions of market theory—the unimportance of externalities and the easy transferability of water flows—are plainly related. They are assumptions that make sense only to those who know little about the many roles of water in sustaining all forms of life. A third assumption of market theory is based on an equal dose of ignorance: the assumption that owners of private property take care of what they own. Market theory presumes that property is safe and secure once it is in the hands of a private owner. If we can simply get property into private hands—so the theory goes—giving the owners clear, secure rights and allowing them to transfer the rights easily and cheaply, then all will be efficient and well. The owner will take care of the property, keeping it useful and healthy in the long run.

There is a fair amount of truth to this line of argument—people typically do take better care of long-term rights than short-term ones; they often take better care of secure, transferable rights than they do rights that are temporary and precarious; and of course commonly owned resources and government resources are often badly used. Private responsibility can be better than public irresponsibility. But in the end, even holders of secure, perpetual, transferable rights do not always take good care of what they own.<sup>24</sup> Timber companies sometimes clearcut their fee-

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9, at 27-28. One way that junior users can sometimes be protected is by providing them with adequate substitute water supplies. See Harrison C. Dunning, *The "Physical" Solution in Western Water Law*, 57 U. COLO. L. REV. 445 (1986).

<sup>21</sup> See NATIONAL RESEARCH COUNCIL, *supra* note 11, at 42.

<sup>22</sup> The typical experience in water transfers is that measures to mitigate the external effects of a water transfer end up reducing the amount of water that a particular owner can transfer, with the nontransferable amount then forfeited. Plainly, the more water that is forfeited and the less water that is transferable—and the higher the transaction costs—the less likely an owner will be willing to make a transfer. See NATIONAL RESEARCH COUNCIL, *supra* note 11, at 34-36; Willey, *supra* note 9, at 410-12. More restrictive rules that protect the surrounding community, such as appurtenancy requirements and area-of-origin protections, see *supra* note 20, can render water flows almost entirely nontransferable. Once a water right becomes nontransferable, it is likely to remain in place until the owner voluntarily terminates it (for reasons of ethics, economics, or otherwise) or until the water right comes to an end. A water right can end legally if it was originally limited in its duration (for example, a permit for a set term); it might also end if the use being made of the water comes to be viewed as unreasonable or nonbeneficial. The relative merits of markets and legal mechanisms in bringing about changes in water-use practices are considered in Freyfogle, *supra* note 11, at 511; the interplay of these forces in California is considered in Brian E. Gray, *The Modern Era in California Water Law*, 45 HASTINGS L.J. 249 (1994).

<sup>23</sup> This assumes that no legal mechanism is in place to bring the water use to an end. See *supra* note 22.

<sup>24</sup> Some of the trouble, although far from all of it, has to do with the rates at which future harms are discounted to the present. An introduction to the issue is Daniel A. Farber & Paul



simple forests and walk away.<sup>25</sup> Farmers often plow hillsides, knowing full well the erosion that ensues.<sup>26</sup> Irrigation practices ruin soil; groundwater pumping drains aquifers.

The point is, private owners do not always take care of what they own. When an owner's destruction or consumption has few or no public ramifications, this shortcoming presents little in the way of a public problem. But in the case of water, bad use inevitably affects the public, just as bad land use does. As we seek to promote ecological integrity, to restore and maintain sound waterways, we have to concern ourselves with how water is used. Buying back water flows is one way of promoting this goal, sometimes a good one. But with a resource as public and vital as clean water, we simply cannot give private owners free rein over what they own. We cannot assume, particularly when faced with so much contrary evidence, that private water owners will maintain an adequate focus on the long-term and the sustainable. We cannot forget that, under still-prevailing norms, to own a thing is to hold the right to destroy it.

## II.

Aside from the problems raised by and with market theory, Western water law is gravely troubling because of the messages it conveys; troubling, that is, in light of its influential, inescapable role in expressing common values and promoting public understanding.

As popularly understood, the West today faces a water problem. But this formulation miscasts the drama, confusing cause with effect. The problem lies not with the supply of water—not with a planet that is somehow substandard or defective—so much as it does with the demands of people, with the ways people use water and constantly want more of it. How we use water has a lot to do with how we comprehend it, which ties directly to our shared values and understandings. One of the law's vital public functions is to express cultural values, to help us remind and re-educate ourselves about how we ought to act in relation to the natural order.

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A. Hemmersbaugh, *The Shadow of the Future: Discount Rates, Later Generations, and the Environment*, 46 VAND. L. REV. 267 (1993).

<sup>25</sup> The *New York Times* reported on the aftermath of a cutting spree of private forest land in Montana:

Throughout the 1980's, the Champion International Corporation went on a tree-cutting spree in Montana, leveling entire forests at a rate that had not been seen since the cut-and-run logging days of the last century.

Now the hangover has arrived. After liquidating much of its valuable timber in the Big Sky country, Champion is pulling out of Montana, leaving behind hundreds of unemployed mill workers, towns staggered by despair and more than a thousand square miles of heavily logged land.

Timothy Egan, *Montana's Sky and Its Hopes Are Left Bare After Logging*, N.Y. TIMES, Oct. 19, 1993, at A1.

<sup>26</sup> Modern farming degrades the soil in many ways other than wind and water erosion. The extent of this problem, which afflicts most farmland (as well as much grazing and timber land), is considered in JAMES GLANZ, *SAVING OUR SOIL: SOLUTIONS FOR SUSTAINING EARTH'S VITAL RESOURCE 2* (1995).

When we consider water rights thinking as a form of public moral education, what messages does it convey, and how wise are they?

The dominant message of water rights is that water is a commodity, an object that exists for humans to move and manipulate, a thing that exists primarily to serve human needs. As a commodity, water is like other commodities, like bricks or teacups or paper bags or pianos. It is something we can use and consume and throw away, all as we like. This message is not entirely false, but it is not true by more than half. Water-as-commodity misses the ecological values, the spiritual values, the aesthetic values. It erroneously and dangerously suggests that water is valuable primarily as a tool for one person—the owner—to use to gain economic advantage over other persons. The far different reality, it ought to be clear, is that water is much more than a commodity: It is something else as well, something more that the law of water needs to recognize. A sound water law would embody and transmit sensitive, ethical messages about the multiple values of water. It would foster the kind of cautious, respectful attitude that a person ought always to possess whenever he tinkers with natural hydrologic cycles.<sup>27</sup>

Talk of water rights and vested entitlements conveys a related influential message. In the ideology of the free market, a human community is nothing more or less than a collection of individuals, a gathering of individual people whose purchasing preferences are aggregated by invisible market forces. The human community is the sum of its parts, and is fully understood by summing its parts. This kind of free-market thinking appeals to Americans in part because it comports so well with our liberal heritage. We like its focus on the individual; we like how it exalts individual freedom more than countervailing ideas of commitment and interconnection.

Water rights thinking taps into this atomistic social view, a view that transfers all too perniciously from the social realm to the natural one. If the social order is simply a collection of individuals, what then is the natural world but a collection of discrete parts? What then is the great outdoors but a grand storeroom of “resources” waiting for some human to come along and pull them off the shelf? Markets work best when people act independently, when products and services come in discrete pieces that the market can move and shift to meet customer demands. When mar-

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<sup>27</sup> See David H. Getches, *Water Resources: A Wider World*, in NATURAL RESOURCES POLICY AND LAW: TRENDS AND DIRECTIONS, *supra* note 3, at 124; A. Dan Tarlock, *New Commons in Western Waters*, in WATER AND THE AMERICAN WEST: ESSAYS IN HONOR OF RAPHAEL J. MOSES 69 (David Getches ed., 1988). For a good commentary on the implications of water as commodity, see generally Dunning, *supra* note 9. One recent effort to promote such a mode of thought in property law generally is Carol M. Rose, *Given-ness and Gift: Property and the Quest for Environmental Ethics*, 24 ENVTL. L. 1 (1994). For an earlier, classic piece, see Lynton K. Caldwell, *Rights of Ownership or Rights of Use?—The Need for a New Conceptual Basis for Land Use Policy*, 15 WM. & MARY L. REV. 759 (1974); see also Susan Emmenegger & Axel Tschentscher, *Taking Nature's Rights Seriously: The Long Way to Biocentrism in Environmental Law*, 6 GEO. INT'L ENVTL. L. REV. 545 (1994); Jerry L. Anderson, *Takings and Expectations: Toward a "Broader Vision" of Property Rights*, 37 KAN. L. REV. 529 (1989); John A. Humbach, *Law and a New Land Ethic*, 74 MINN. L. REV. 339 (1989).

ket thinking turns its attention toward the natural world, it inevitably retains this inherent focus on individual parts. Customers do not want to buy ecosystems, they want to buy its pieces and elements—its trees, its animals, its water, its soils; they want to “part it out,” to use the slang of the used-auto trade. The pitfall here is that we undervalue the connections, assuming we even perceive them. In nature, the whole is far more than its parts. As one moves up the scale of biological complexity, from cell to organism to community to ecosystem, emergent properties arise that were not present in, and often were not even discernible or predictable in, lower levels of organization.<sup>28</sup> In its main thrust, market thinking stands in fundamental opposition to the ecological truths of connection and interdependence.<sup>29</sup>

Beset as it so often is with “physics envy,” market ideology strains to cast people and nature as inputs in a simplified and degrading mathematical formula. Each consumer is portrayed as a separate actor, in aggressive pursuit of personal wants. Each part of nature is a discrete “resource,” awaiting the market’s call to flow to the highest dollar use. But to comprehend the world in such a distorted manner is to ignore the community in all of its natural and social forms.<sup>30</sup> It is to ignore, for instance, how a honeybee is more than a collection of cells, how a hive is more than a gathering of individual bees, how a bee-angiosperm-water-sunlight-soil community is far more than the sum of its parts. Given the profound, probably everlasting constraints on our knowledge of nature, we do not fully know what it means for a natural community to be healthy, or to maintain its functioning integrity.<sup>31</sup> Yet, there plainly is such a thing as an ecological community, and as much as an individual organism (albeit in different manners) it can function in ways that are more or less healthy.<sup>32</sup> To assume that humans can reshuffle nature’s parts at will, disregarding the larger natural whole, is to deny the most elementary facts of life. It is to be ignorant of, and deliberately to discount, the ecosystem processes on which humans and other lives depend. It is to cast aside all understanding of the many ways that humans live as parts of larger groups—families, tribes, clans, neighborhoods, congregations, towns, clubs, business entities, and the like—acting not in isolation but in concert and context.<sup>33</sup>

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<sup>28</sup> See RICHARD LEVINS & RICHARD LEWONTIN, *THE DIALECTICAL BIOLOGIST* 152-60 (1985).

<sup>29</sup> For a good critique of free market environmentalism, see Michael C. Blumm, *supra* note 10, at 376; see also Christopher Manes, *The Free Marketeers Cross Swords with Traditional Environmentalists*, 5 *WILD EARTH* 8 (1995); Michael C. Blumm & Thea Schwartz, *Mono Lake and the Evolving Public Trust in Western Water*, 37 *ARIZ. L. REV.* 701 (1995) (discussing how the public trust doctrine promotes in-stream flow values while accommodating the legitimate needs of private water users).

<sup>30</sup> For a provocative, recent addition to the literature on community, see WENDELL BERRY, *Conserving Communities*, in *ANOTHER TURN OF THE CRANK* 8 (1995).

<sup>31</sup> See *ECOSYSTEM HEALTH* (Robert Costanza et al. eds., 1992).

<sup>32</sup> For good introductions to some of the key ideas in ecology, see Judy Meyer, *The Dance of Nature: New Concepts of Ecology*, 69 *CHI.-KENT L. REV.* 875 (1994); DONALD WORSTER, *NATURE’S ECONOMY: A HISTORY OF ECOLOGICAL IDEAS* (2d ed. 1994).

<sup>33</sup> See WES JACKSON, *BECOMING NATIVE TO THIS PLACE* (1994); RODERICK F. NASH, *THE RIGHTS OF NATURE: A HISTORY OF ENVIRONMENTAL ETHICS* 4, 5 (1989).

In its denial of community, free-market ideology reflects a failure of the moral imagination. An ethical being, first and foremost, is a responsible member of each community of which he or she is a part, including each natural community.<sup>34</sup> Moral growth is the process of becoming aware of these community links and acquiring the diverse disciplines needed to grow and nourish these links. In the morally impoverished realm of market theory, an individual's "preferences" (as they are so blandly termed) are never good or bad, moral or immoral. They simply exist, and the market's job is to satisfy them. If the market were only one of many social gatherings—even better, if it were a minor one—we could perhaps overlook its moral emptiness. But the market is becoming, if it has not already become, the dominant form of social interaction. To the extent the market promotes moral conduct it does so in ways that include debilitating effects.<sup>35</sup> It encourages us to be self-centered; to be aggressive in seeking what we want; to put self before others; to take advantage of others; to live, in short, a mean and degraded life.

Perhaps the central limitation on market thinking stems from its reliance on a troubling premise that permeates and characterizes modern culture. The entrenched tendency of modern thought is to separate humans from the rest of the natural world, to assume that humans are subjects and that nature is mere object. French philosopher Rene Descartes is often blamed for this subject-object dualism, but he hardly originated it, nor was he the only major thinker of his generation to make this dualism a central element of his world view.<sup>36</sup> Since the age of Darwin we have slowly narrowed this radical separation of humans and all else, but the gap remains vast and dangerous. Environmental problems are ubiquitous today precisely because and to the extent that human ways and nature's ways are out of alignment. We cannot restore that alignment without embracing our dependence on the natural order. And to do that, to regain a sense of belonging to a place, we have to develop more mature ways of explaining our complex connections to the land.<sup>37</sup> Nature is here for us to use to meet our needs. But we are part of that nature, as dependent on it in the long run as any wolf or jellyfish or newt. Our laws, particularly those dealing with the land and its component parts, need to reflect and proclaim this eternal dependence.

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<sup>34</sup> See, e.g., AMITAI ETZIONI, *THE SPIRIT OF COMMUNITY: THE REINVENTION OF AMERICAN SOCIETY* (1993); ROBERT N. BELLAH ET AL., *HABITS OF THE HEART: INDIVIDUALISM AND COMMITMENT IN AMERICAN LIFE* (1985); BERRY, *supra* note 30.

<sup>35</sup> This is not to deny that the market fails to provide some types of moral training, such as training in hard work, reliability, and punctuality, at least for some people. These traits can and do benefit the community, but market participants are encouraged to develop them for selfish rather than communal reasons.

<sup>36</sup> See NEIL EVERNDEN, *THE NATURAL ALIEN: HUMANKIND AND ENVIRONMENT* 49-79 (1985) (discussing the subject-object dualism); J. BAIRD CALLICOTT, *The Conceptual Foundations of the Land Ethic*, in *IN DEFENSE OF THE LAND ETHIC: ESSAYS IN ENVIRONMENTAL PHILOSOPHY* 75 (1989).

<sup>37</sup> See JACKSON, *supra* note 33; SCOTT RUSSELL SANDERS, *STAYING PUT: MAKING A HOME IN A RESTLESS WORLD* (1993).

When water law allows uses that drain rivers dry, that damage the soil, and that seriously pollute, it offers up its influential, legitimating stamp of approval. What the law allows may prove unwise or unprofitable, but it is socially accepted; it is permissible and thus appropriate. Harm that the law ignores is easy for the water user to ignore. The mere phrasing of a water-use entitlement as a private right adds to this unhelpful sense of legitimacy. By asserting an individual right, a water user makes a claim against the community, imposing on others a corresponding duty to refrain from interference. A holder of rights claims special treatment; she asserts a superior position in the community and hence distances herself from that community; she employs rhetoric that divides the community into parts, exalting the parts over the whole.<sup>38</sup>

Any effort to promote water marketing must take into account, and assume responsibility for, the damaging messages that inevitably come along with it: water as commodity; nature as resource; community as voluntary and dispensable; humans as lords.<sup>39</sup>

### III.

The water-rights system so debated today is part of a larger private-property regime, created over many centuries and handed down within our culture, generation to generation. Private ownership is a form of state-sanctioned private power; by owning something, we gain rights that offer power, not just over the thing itself, but over other people whose lives are linked to the thing. The main justification for this system, really its only defensible justification, is that it is useful; it provides benefits that exceed its costs.<sup>40</sup> Utilitarian thinking of this type supplies a potent justification for many forms of private ownership, but it is a shaky and insecure justification in that calculations of utility depend on values and circumstances that shift greatly over time. Because communities differ and circumstances vary, private-property regimes have come in a wide variety of shapes and sizes over the course of human history, each arising to address the needs of a particular people.

For a private property regime to fulfill its functions and retain its moral legitimacy, it needs to be kept up to date, to bend and take on new

<sup>38</sup> See MARY ANN GLENDON, *RIGHTS TALK* (1991).

<sup>39</sup> For a general account of the difficulties in applying ownership norms to the natural order, see THEODORE STEINBERG, *SLIDE MOUNTAIN, OR THE FOLLY OF OWNING NATURE* (1995).

<sup>40</sup> For a good summary and critique of the various justifications for private ownership, see generally LAWRENCE C. BECKER, *PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS* (1977); *PROPERTY: MAINSTREAM AND CRITICAL POSITIONS* (C.B. McPherson ed., 1978) (extracting 10 works from political and social theorists, jurists, historians, and economists regarding property institutions). The leading proponent of a property theory that is not strictly consequentialist is Margaret Jane Radin, who promotes a personality theory of ownership that draws extensively upon nineteenth-century German philosophy. See, e.g., MARGARET J. RADIN, *REINTERPRETING PROPERTY* (1992). Applied to water law, Radin's theory, like the natural flow theory of two centuries ago, would grant special protection to water uses closely linked to the owner's personal life—that is, to household water uses. The personality theory provides conflicting signals when assessing the value of irrigation uses that sustain family life but only at the cost of massive ecological damage.

shapes as communal values and circumstances evolve. Sometimes that happens smoothly, as it largely did in the nineteenth century when cultural values shifted to emphasize economic development and geographic expansion at the expense of sensitive land uses and settled agrarian culture.<sup>41</sup> Sometimes, though, change does not come smoothly. Sometimes property regimes get out of date, a prospect that becomes both more likely and more ominous when holders of private rights are politically powerful enough to resist change. When change is halted, a property regime begins to lose its legitimacy. Step by step, people come to view it as unfair, as an illegitimate exercise of state-sanctioned power, as an enemy that divides and destroys the community rather than as a tool that supports and sustains it. Sometimes it is the allocation of property within the society that causes the problems. More commonly it is the way ownership rights are defined, it is the elements or attributes of what private ownership entails. Private property yields its legitimacy when, in the eyes of community members, it vests owners with the power to impose harm without consequence; when it allows them to dominate others unfairly; when it allows them to abuse and undermine things that the community has come to treasure.

In the 1960s, Congress passed laws banning racial discrimination in public accommodations, restaurants, and motels. Affected property owners claimed their property rights were being altered, and they were right. Before the new laws, landowners had the right to discriminate; after the laws they no longer had that power. They lost the power to discriminate, and for just this reason: In the evolving culture of the day, the power to discriminate had become an unfair form of power, a cruel and hurtful form of domination.<sup>42</sup>

Consider a second scene, from the hills of eastern Kentucky, a landscape of badly polluted rivers and degraded communities.<sup>43</sup> During the first half of this century, holders of mineral interests in Kentucky had the right to destroy the surface of the land and every structure on it in their race to stripmine the coal. They caused grave damage, and paid no compensation. By the 1960s, that form of private ownership had lost public

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<sup>41</sup> See MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1780-1860* (1977); WILLIAM WESTON FISHER III, *THE LAW OF THE LAND: AN INTELLECTUAL HISTORY OF AMERICAN PROPERTY DOCTRINE, 1776-1880* (Ph.D. thesis, Harv. Univ., 1991).

<sup>42</sup> Cf. *Heart of Atlanta Motel, Inc. v. United States*, 379 U.S. 241 (1964) (holding that the Civil Rights Act of 1964 intended to eliminate the burden race discrimination placed on interstate commerce).

<sup>43</sup> For the legal history upon which this scene is drawn, see generally *Ward v. Harding*, 860 S.W.2d 280 (Ky. 1993) (holding a broad form deed does not include the right to strip mine); *Akers v. Baldwin*, 736 S.W.2d 294 (Ky. 1987) (permitting surface mining but requiring the payment of damages and proposing revisions to strip mining laws), *cert. denied*, 114 S. Ct. 1218 (1994). See Robert M. Pfeiffer, *Kentucky's New Broad Form Deed Law—Is It Constitutional?*, 1 J. MIN. L. & POL'Y 57 (1985) (discussing whether mineral owner may surface mine property conveyed through broad form deed); David A. Schneider, *Strip Mining in Kentucky*, 59 Ky. L.J. 652 (1971) (reviewing past successes and failures of strip mining and proposing revisions to strip mining laws); WENDELL BERRY, *The Landscaping of Hell: Strip-Mine Morality in East Kentucky*, in *THE LONG-LEGGED HOUSE* 12 (1967).

favor, and the push for change gained strength. By the 1980s, disfavor had become so strong and so angry that, for many Kentuckians, the very legitimacy of the state was in question. For far too long the government had bent to the wishes of the coal mining industry. Change came slowly in Kentucky, but come it did. Today, mining companies still can destroy the land surface without bothering to seek permission.<sup>44</sup> But at least they have to pay for what they destroy. Sooner or later, one day, they will need to ask consent.

Since prior appropriation was born in the 1850s, it has undergone a continuing evolution in the elements that define private rights. Yet even with this evolution, people are increasingly offended by it. As critics see it, water law gives owners too much power to dominate and cause harm. What is noteworthy about this otherwise unexceptional evolution is that the underlying harm is not to other people, at least not directly. It is harm to the land and water itself. Restaurants that discriminated by race caused human harm. Strip miners did destroy land, but the harm that moved Kentucky citizens to react was less the environmental degradation than it was the human drama, the farm houses slipping down hillsides, the towns being literally uprooted, the poor people ejected as so much trash. Cultural values, circumstances, definitions of harm, and aesthetic appraisals—all of them change. If water law is going to retain its legitimacy, it too needs to change, far more than it has done.

The water rights advocate, of course, has a ready response to all of this. Are not we simply talking about the need to shift water uses? Cannot the market accommodate this fluctuation in preferences? Cannot tax dollars be used to purchase the water flows now needed to promote ecosystem health and other new public values?

The answer is yes, the market can help alleviate this problem; and yes, tax money can end the most affronting and damaging water uses. But moving money around does not address the core concern of morality and legitimacy. Market transfers shift rights among owners and bring about resource reallocations, but they do not alter the nature of those rights. In the case of water law, as with the 1960s restaurants and the Kentucky stripminers, the complaint is not about the distribution of property rights. It is about the meaning of ownership itself, about the power that private ownership entails. For the law to remain legitimate it needs to ban harmful activities, which is to say activities the community has come to view today as wrong and illegitimate. It is not enough for the law to furnish mechanisms to pay property owners to stop the harm. We could have paid motel owners to stop discriminating, and perhaps there was a moment in time when payment appeared sensible. By the 1960s, that solution was no longer just. And it was not simply a matter of saving tax money. Racial discrimination had come to be wrong. It was no longer legitimate for state-sanctioned power to stand ready to aid landowners who chose to discriminate.

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<sup>44</sup> *Ward*, 860 S.W.2d at 287.

If our current water rights regime does indeed face a crisis of legitimacy, what is the nature of the problem? By all appearances, the complaint being raised today against Western water law does not call into question the idea of private rights in water, any more than past complaints challenged the private ownership of restaurants or coal mines. Americans are not socialists, particularly Americans who live in arid places. Beyond that, it is equally plain that the complaint against water law has little directly to do with priorities based on time.<sup>45</sup> The first-in-time rule is not the fairest method of allocating scarce resources, but it is hardly the most unfair either, and our culture remains content to let many races go to the swiftest.<sup>46</sup>

Western water law faces a crisis of legitimacy because of the way it defines water rights, because it allows water uses that now seem wrong. Some permitted uses, in fact, now seem so wrong that it would be an affront to communal values, as well as a distasteful reaffirmation of a flawed property regime, to expect taxpayers to pay owners to change their hurtful ways. To expect the market to remedy this situation is to misunderstand the law's unavoidable role in expressing communal values, particularly our shared, evolving senses of community and lasting health.

#### IV.

How then might the law of prior appropriation change in order to regain its legitimacy, to respond to the mounting claim that it empowers private owners to use their property in ways that unjustly harm and oppress?

One obvious target for change is the rule that a water right is obtainable only if a user diverts the water from the streambed.<sup>47</sup> By requiring diversion, water law discredits water uses that promote instream-flow values, particularly the natural health of the waterways themselves. To the ecologically aware, the law's foolishness could hardly shine more brightly. Aside from the harm they do, foolish laws lack the requisite level of legitimacy. The time has come for change.

A second target for reform is the long-standing, much-modified rule that water is available for appropriation so long as a single drop remains

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<sup>45</sup> Indirectly, the complaint does address the first-in-time rule. Inefficient uses are permitted today largely because they are first in time and because holders of such rights claim protection for that very reason. Still, the central problem deals with the nature of the water use, not the identity of the user.

<sup>46</sup> Freyfogle, *supra* note 11, at 493-99 (discussing the logic and fairness of capture-based water allocation schemes).

<sup>47</sup> For a discussion of both the dominant rule and the recently imposed limitations to it, see TARLOCK, *supra* note 4, § 5.15; *see also* Lower Colorado River Auth. v. Texas Dep't of Water Resources, 689 S.W.2d 873 (Tex. 1984) (considering only whether a new appropriation would interfere with other consumptive uses); A. Dan Tarlock, *Appropriation for Instream Flow Maintenance: A Progress Report on "New" Public Western Water Rights*, 2 UTAH L. REV. 211 (1978) (considering the various methods of protecting instream flow values by leaving some water in rivers and streams).



in the stream or aquifer.<sup>48</sup> Total consumption, draining a river dry, is the apotheosis of shortsighted, anthropocentric hubris. A more sensible rule must be found.

These two matters, and several others like them, would improve prior appropriation law. But if we are to cut to the root of the problem, we need to get serious about the long-standing yet ineffectual requirement that all water uses be beneficial.<sup>49</sup> As too often now applied, beneficial use is out of date, not the least because it ignores water quality.<sup>50</sup>

Beneficial use too often means beneficial based on circumstances in effect in the late nineteenth century when almost any type of mining, agricultural, or commercial use of water seemed beneficial, without regard for environmental consequences or foreseeable shortages. Beneficial use as it stands today is an affront to attentive citizens who know stupidity when they see it, who know, for instance, that no public benefit arises when a river is fully drained so that its waters might flow luxuriously through unlined, open ditches onto desert soil to grow surplus cotton and pollute the water severely. People know better than this, and if the law does not soon learn better, the clamor for change will become more angry and disruptive.

Beneficial use must expressly come to mean beneficial by the standards of *today's* culture, not by the standards of some culture long-eclipsed by changing values and circumstances. It must come to mean beneficial to the *community*, not just to the individual user, particularly a user whose calculation of gain ignores resulting ecological harms. Bank robbery, after all, is beneficial to the robber.<sup>51</sup>

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<sup>48</sup> For a thorough discussion of the traditional rule, see TARLOCK, *supra* note 4, § 5.05[2]-[7]. For a recent case authorizing appropriations for instream flow by state agencies, see *Nebraska Game & Parks Comm'n v. The 25 Corp.*, 463 N.W.2d 591 (Neb. 1990).

<sup>49</sup> TARLOCK, *supra* note 4, § 5.16; Getches, *supra* note 27, at 126-32. For a good assessment of the doctrine in its early manifestation up to the advent of the age of environmentalism, see Frank J. Trelease, *The Concept of Reasonable Beneficial Use in the Law of Surface Streams*, 12 WYO. L.J. 1 (1957). One proposal for changing beneficial use is to reduce waste in current agricultural and conveyance practices. Robert A. Pulver, Comment, *Liability Rules as a Solution to the Problem of Waste in Western Water Law: An Economic Analysis*, 76 CAL. L. REV. 671 (1988). An early, erroneous prediction was that beneficial use would take on real meaning. See, e.g., Samuel C. Wiel, *Natural Communism: Air, Water, Oil, Sea, and Seashore*, 47 HARV. L. REV. 425, 431-32 (1934). For a libertarian argument against beneficial use, expressing unbounded zeal for the unregulated market, see Stephen F. Williams, *The Requirement of Beneficial Use as a Cause of Waste in Water Resource Development*, 23 NAT. RESOURCES J. 7 (1983).

<sup>50</sup> Water quality issues are considered in TARLOCK, *supra* note 4, § 5.19[1] ("Water quality considerations were ignored in the development of western water law, and western water quantity and water quality law developed on parallel tracks."); see DAVID H. GETCHES ET AL., *CONTROLLING WATER USE: THE UNFINISHED BUSINESS OF WATER QUALITY PROTECTION* (1991); Jan G. Laitos, *Assault on the Citadel Part I: Water Quality Laws and the Exercise of Water Rights*, 17 COLO. LAW. 1305 (1988); Jan G. Laitos, *Assault on the Citadel Part II: Dams, Diversions, and Water Quality Regulations*, 17 COLO. LAW. 2003 (1988); Ralph W. Johnson, *Water Pollution and the Public Trust Doctrine*, 19 ENVTL. L. 485 (1989).

<sup>51</sup> See Lynda L. Butler, *Private Land Use, Changing Public Values, and Notions of Relativity*, 1992 B.Y.U. L. REV. 629, 631-32 (noting that private economic gain cannot be the sole determinant when evaluating the utility of property uses); Cass R. Sunstein, *Endogenous*

Two options exist to foster these needed legal changes. Each, unfortunately, has limitations. Back in the last century, the chief method used to update property law was by way of common-law decision making.<sup>52</sup> Property law was a creation of state courts, and judges did their best to keep it current. During the past century, the main business of making property law has shifted to legislative and regulatory chambers. Ownership norms are now set forth in land-use regulations and environmental laws, with the common law left behind.

For several good reasons, change in water law is better made by legislatures and regulatory agencies. Change made in this manner can build on detailed hearings and multiple views, with experts called to help. Legal lines can be drawn sharply in a way that common-law courts find awkward, if not impossible. Whenever useful, change can occur prospectively; it can be phased in, with advance warning to parties affected.

But legislative and regulatory change also has drawbacks, largely political ones. Try as they might, agencies have trouble identifying and fostering a public interest. Too often and too visibly they are bent by vested interests.<sup>53</sup> Legislatures, sadly, are just as prone to lend support for public-choice theories of small-group domination.<sup>54</sup> If the experience of public-lands politics is any model, prospects for useful reform are guarded at best.<sup>55</sup>

Common-law change usually escapes this undue influence, but it too faces limits. Courts cannot hold exhaustive hearings. Judges are rarely experts in water law, much less in the ecology, ethics, and economics of water policy. Courts favor vague standards, not sharp lines. Perhaps the most troubling concern is that common-law adjudication usually works retroactively, with newly announced rules applied not just to future disputes, but to the very case under consideration. When a court decides that a water use is unreasonable or nonbeneficial, it does not admonish the water user to halt the practice soon: It declares the water right at an end.<sup>56</sup>

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*Preferences. Environmental Law*, 22 J. LEGAL STUD. 217, 254 (1993) (critiquing the overreliance of private preferences).

<sup>52</sup> See HORWITZ, *supra* note 41, at chs. 1-3.

<sup>53</sup> See DANIEL A. FARBER, *From Plastic Trees to Arrow's Theorem*, 1986 U. ILL. L. REV. 337, 352-54 (1986).

<sup>54</sup> See DANIEL A. FARBER & PHILIP FRICKEY, *LAW AND PUBLIC CHOICE* ch. 1 (1991).

<sup>55</sup> See, e.g., MICHAEL C. BLUMM, *Public Choice Theory and the Public Lands: Why "Multiple Use" Failed*, 18 HARV. ENVTL. L. REV. 405 (1994).

<sup>56</sup> The legal precedent on this last point is modest, given the infrequency with which courts determine that water uses are unreasonable, and flexibility perhaps still exists. The typical presumption of courts seems to be that, if a water use is unreasonable or nonbeneficial, the user has no property right in the water flow being used. See, e.g., *Joslin v. Marin Municipal Water Dist.*, 429 P.2d 889 (Cal. 1967) (finding that no takings claim arose once it was determined that the plaintiff's water use was unreasonable). *But see Imperial Irrigation Dist. v. State Water Resources Control Bd.*, 231 Cal. Rptr. 283 (Cal. Ct. App. 1986). In *Imperial Irrigation District*, the court upheld a determination by the state water board that a massive irrigation district was acting unreasonably by failing to implement elementary water conservation measures. *Id.* at 283-84. Once this determination was made, however, the irrigation district did not forfeit its water rights; the state board, and the court, allowed the water user time to implement the needed water conservation measures, and to transfer

On balance, legislative and regulatory changes offer the better option, but they raise another cautionary concern that very much affects their long-term prospects. One reason why the water-rights debate is so contentious is because our ideas of property ownership are so tied with one particular part of our legal culture. Until the mid-nineteenth century, land-use regulations were viewed as amplifications and modifications of the ownership norms set forth in the common law. But right around mid-century, an important break occurred.<sup>57</sup> Land-use statutes and regulations came to be viewed as a separate realm of law—a public realm that was distinct from private ownership norms and that served, not to refine and update these norms, but to curtail them in pursuit of public aims.<sup>58</sup> In time, as environmental laws arrived, they too were placed in the public law category. The distinction seemed particularly sharp in the case of federal statutes and regulations, which appeared far removed from ownership norms arising under state law.

In reality, land-use ordinances and environmental regulations are very much part and parcel of contemporary private ownership, including the ownership of water. Only the legal mind holds on to this artificial separation; only the legal mind remains dominated by the law's old dichotomies—private versus public, common law versus statute, state versus federal. Until we can put these dichotomies behind us, statutory and regulatory changes to water law will draw undue fire. New definitions of beneficial use and other needed changes to Western water law must be understood for what they are—updating changes in the ownership rights of private rights holders. They are redefinitions of those private rights, modernizations of those rights, not interferences with them. If defenders of the old order are going to keep going back to the nineteenth century, if they continue to insist that the common law is the one and true source of private ownership norms,<sup>59</sup> statutory and regulatory change can only partially succeed.

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the water thereby saved to Los Angeles. *Id.* at 284. This latter approach gives adjudicators a flexible remedy, the availability of which may embolden a court (or administrative agency) to conclude that a particular water use is unreasonable. On the other side, the outcome in *Imperial Irrigation District* reduces the perhaps useful fear that water users might otherwise face. A water user who faces the risk of forfeiture will think twice before forgoing water conservation measures or other steps to improve the efficiency and social utility of her water use. That sense of danger and urgency is much diminished when the risk is merely that a court some day will order change and give the user time to make it.

These cases, and others in the continuing story of California water law, are ably considered in Gray, *supra* note 22.

<sup>57</sup> See HORWITZ, *supra* note 41, at 34-53. Morton Horwitz assumes as the turning point Lemuel Shaw's decision in *Commonwealth v. Alger*, 61 Mass. (7 Cush.) 53 (1851). See LEONARD W. LEVY, *THE LAW OF THE COMMONWEALTH AND CHIEF JUSTICE SHAW* 247-54 (1957).

<sup>58</sup> See Eric T. Freyfogle, *The Owning and Taking of Sensitive Lands*, 43 UCLA L. REV. 77, 103-06 (1995).

<sup>59</sup> Perhaps the two leading exponents of the view that the common law is the sole source of private ownership norms are Professor Richard Epstein and Justice Antonin Scalia. See, e.g., RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* (1985); Fred P. Bosselman, *Scalia on Land*, in *AFTER LUCAS: LAND USE REGULATION AND THE TAKING OF PROPERTY WITHOUT COMPENSATION* 82 (David L. Callies ed., 1993); Fred P. Bos-

To bring Western water law up-to-date, bold changes are needed. Whether operating in legislative or judicial arenas, lawmakers must openly state that many current water uses are simply not appropriate—unlined irrigation ditches running through desert lands, irrigation to grow pasture grasses and hay crops, diversions that yield substantial salinization and other pollution, diversions to grow cotton or rice in the desert, and un-metered municipal water systems, to name a few. In many settings, perhaps all such water uses simply do not promote the common good, which surely ought to be the pre-eminent legal standard. And the time has come to say so.

When weighing the utility of particular water uses, lawmakers need to fashion and apply new standards of harm, ones that embrace a longer time frame and that recognize humans' inextricable dependence on surrounding natural communities. Harm must register and weigh in the balance even when it is widespread or far downstream, even when it is hard to trace and its causes are many. Harm to ecological communities deserves attention, even if no human today can demonstrate pecuniary loss. Given that our knowledge of nature is so frightfully limited and is likely to remain that way, there is abundant need for caution on this point. Because we cannot fully predict the effects of particular water diversions and pollutants, we would be wise to err on the side of caution when passing judgment on individual cases. We should err on the side of mimicking natural water flows more closely and reducing pollutant loads as far as possible, so as to reduce the nasty surprises that so often jump out at us when we tinker arrogantly with the natural order.<sup>60</sup>

As lawmakers update water law to halt communally harmful land uses, they may find it useful to reassess the language of prior appropriation. Something like the beneficial-use rule needs to stand firm as a potent, evolving restraint on unwise water practices. But the term itself is not essential and might in fact account for some of the resistance the underlying guideline now confronts. We Americans do not like to be told what to do, particularly when it is the government telling us to be good. We prefer being told not to cause harm. At the core of property law is the old *sic utere* doctrine, which requires private property owners to cause no harm to others.<sup>61</sup> Modern private nuisance law builds on that doctrine, banning unreasonable land uses that create substantial harm.<sup>62</sup> In contrast to nuisance law and *sic utere*, beneficial use conjures up images of ideal or socially optimum water uses, as determined, presumably, by agencies and bureaucrats. It is little wonder that beneficial use makes water users nervous. To reap the communal benefits of durable private rights in water, we cannot insist that private owners engage in the most socially beneficial

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selman, *Four Land Ethics: Order, Reform, Responsibility, Opportunity*, 24 ENVTL. L. 1439, 1485-506 (1994) (discussing Justice Scalia's land ethic).

<sup>60</sup> See Eric T. Freyfogle, *The Challenge of Nature as Measure in THE GREENING OF ECONOMICS* (Stephen Marglin ed., forthcoming 1997).

<sup>61</sup> See, e.g., CHARLES DONAHUE ET AL., *PROPERTY: AN INTRODUCTION TO THE CONCEPT AND THE INSTITUTION* 1038 (3d ed. 1993).

<sup>62</sup> ROGER A. CUNNINGHAM ET AL., *THE LAW OF PROPERTY* 417-22 (2d ed. 1993).

water uses, as identified from time to time by a never-ending planning process.<sup>63</sup> What we can expect, and should by law demand, is that water users avoid actions that are harmful, through widely applicable statutes and regulations, preferably ones issued with substantial advance notice.

## V.

There remains, finally, the question that has loomed ominously in the background, awaiting its turn to cause mischief. If lawmakers do wield the power to redefine private water rights, is there any limit to how far they can go? Can they redefine private rights into oblivion? Is there a usable distinction between redefinition and confiscation?

For many observers, both defenders and critics of current law, this issue is the crux of today's dispute. Because no firm answer yet exists, and indeed because few if any feasible answers are even apparent, defenders of private rights have taken a firm line, the extreme being that even a modest alteration of water rights amounts to a taking, triggering the duty to pay just compensation.

For reasons as much pragmatic as constitutional, private rights deserve protection. And critics who seek to change water rights, particularly those who seek major change, need to face up to the task of explaining that protection.<sup>64</sup> If the Constitution does not protect every last detail of nineteenth-century water rights jurisprudence (and, of course, it does not), what then does it protect? If state legislatures or supreme courts cannot go all the way in redefining rights, how far can they go? The leading water-reform manifestos of the past few years, useful as they are—documents such as the Long's Peak Working Group Report<sup>65</sup> and the important recent volume, *Searching Out the Headwaters*<sup>66</sup>—pay little attention to this matter. Here and there are soothing words about viable private water rights, but soothing words are no replacement for announced, reliable, constitutional protections. In fairness to holders of water rights, this issue needs attention.<sup>67</sup>

One of the key protections for water rights ought to be a requirement that new redefinitions and regulations apply broadly to all water users similarly situated.<sup>68</sup> Given all the current talk about watershed planning,

<sup>63</sup> Freyfogle, *supra* note 58, at 127.

<sup>64</sup> One such effort is Joseph L. Sax, *The Constitution, Property Rights, and the Future of Water Law*, 61 U. COLO. L. REV. 257 (1990); see also Jan Laitos, *Water Rights, Clean Water Act Section 404 Permitting, and the Takings Clause*, 60 U. COLO. L. REV. 901 (1989).

<sup>65</sup> AMERICA'S WATERS: A NEW ERA OF SUSTAINABILITY, REPORT OF THE LONG'S PEAK WORKING GROUP ON NATIONAL WATER POLICY (Natural Resources Law Center, University of Colorado School of Law ed., 1992), reprinted in 24 ENVTL. L. 125 (1994).

<sup>66</sup> BATES ET AL., *supra* note 7.

<sup>67</sup> Several essays that address the subject are contained in WATER LAW: TRENDS, POLICIES, AND PRACTICE, *supra* note 20; see, e.g., Barton H. Thompson, Jr., *Takings and Water Rights*, in WATER LAW: TRENDS, POLICIES, AND PRACTICE, *supra* note 20, at 43. For another useful study, see Douglas L. Grant, *Western Water Rights and the Public Trust Doctrine: Some Realism About the Takings Issue*, 27 ARIZ. ST. L.J. 423 (1995).

<sup>68</sup> See Freyfogle, *supra* note 58, at 125.

integrated assessments, full participation, and the like, one can see why water users might fear that decision making in the age of ecology will be subjective and ad hoc. From the planning rhetoric now so effusive, one might easily forecast an institutional water czar, simply reaching out to seize particular water flows whenever they are needed to serve the public interest. Once a watershed master plan is developed, what happens next? Does the governing agency simply ban all water uses that are less than ideal? In the bubbling cauldron of politics and policy, how is it that watershed planning is supposed to fit together with private water rights?

The power a state needs, and ought to possess, is the power to ban particular bad water uses, even time-honored practices engaged in by many water users. In order to exercise this substantial power, a state must make a settled, uniformly applied determination that a particular practice is harmful, either because it is a wasteful water use wherever conducted or because it has side effects in particular settings that are plainly harmful.<sup>69</sup> A state should have no power to command one water user to halt while allowing a similarly situated water user to continue. The state should not halt a water use simply because state planners come up with a higher or better use; there must be a finding of actual harm, lest water users live with too much fear.

Once harmful water uses are halted, then we can step back and decide how much additional water is needed to foster ecological integrity and promote other instream values that have rightfully become so important. At that stage, however, money ought to change hands; private owners deserve payment for what they lose.

This power that governments rightly ought to possess—the power to ban harmful water uses—is far different from the power to confiscate private water rights. As harmful water uses are identified—whether the governing norms are phrased in terms of harm, reasonable water use, or beneficial water use—the new norms should apply prospectively. A water user engaged in a newly banned use should have three options: shift to a new beneficial use, sell the water, or do nothing and lose it. So long as all three options are open, so long as new rules apply to all similarly situated water users, fairness concerns should not loom large.<sup>70</sup>

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<sup>69</sup> This limit would apply whenever a state imposed new constraints on existing water users. Far greater administrative discretion would exist when a state considered whether to issue permits for new water uses, and when it acted upon requests for permission to change the nature and place of a water use. When dealing with new and altered water uses, state planners should be able to determine socially desirable water uses.

<sup>70</sup> In an important way, this approach is more fair than current law to existing water users engaged in wasteful or communally harmful practices. Under current law, a water user engaging in a wasteful or unreasonable water use faces the risk of having his underlying water right cancelled. Under the proposed approach, the water user would have time to either shift to new uses or transfer the right to someone who would use it lawfully. *See supra* text accompanying note 56. So long as lawmakers act aggressively to ban harmful land uses, current water users will find themselves facing both the carrot and the stick. Water markets should flourish and become less costly to operate, given the sudden rush of sellers who, fearing the stick, have become anxious to sell. With major water-using activities no longer permissible, large quantities of water are likely to remain instream, thereby im-

## VI.

In many of its essentials, prior appropriation law is not dead, as Charles Wilkinson has suggested in his sprightly, teasing memorial.<sup>71</sup> But the public is turning against it, or at least against those parts of it that give owners the power to engage in wasteful water uses and to commit grave environmental harm. If the doctrine is to avoid the legal graveyard, it needs rebuilding.

Americans are poor at history and no doubt a good deal of today's stresses and strains over water rights come because our knowledge is so bounded by the recent and the familiar. Seeing the past dimly, we know little about the malleability and transience of cultural institutions that appear so timeless. Prior appropriation law was useful when and where it was created—on the frontier, in an era when community counted for little and the land was considered a stockpile of wealth awaiting the pick and plow. It is far less useful today.

The accepted story about prior appropriation is that it arose to deal with the physical conditions of the West, particularly its aridity.<sup>72</sup> But law reflects a landscape only as that land is understood by the people and as it shows up in their values and goal. More than aridity, prior appropriation reflected the grab-it-now mentality of the mining camp and homestead rush. In prior appropriation law, just as in frontier life generally, the community carried little weight and the needs of future immigrants counted for nothing.

A society deals wisely with aridity when it recognizes the inevitability of shortages and makes plans to deal with them through reallocation, all the while retaining plentiful water in rivers and lakes to sustain surrounding natural communities. A sound water-rights regime is one that encourages and even demands high levels of water-use efficiency, recognizing that communal needs will change over time and that nature's demands might also shift, particularly as our understanding of ecology improves. Western explorer John Wesley Powell thought long and hard about aridity, and offered useful suggestions on the subject in his little-read *Report on the Lands of the Arid Region of the United States* in 1878.<sup>73</sup> When the

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proving ecosystems and offering adequate security for third-party water users whose uses might otherwise be endangered by changes in the nature and location of senior water uses. For a carrot and stick analysis of current water law, see Gray, *supra* note 22, at 262-306.

<sup>71</sup> Charles F. Wilkinson, *In Memoriam: Prior Appropriation, 1848-1991*, 21 ENVTL. L. No. 3, pt. 1, at v (1991).

<sup>72</sup> See, e.g., Terry L. Anderson & P.J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163, 176-78 (1975); John D. McGowen, *The Development of Political Institutions on the Public Domain*, 11 WYO. L.J. 1, 14 (1956). For a description of how irrigation economies developed based on prior appropriation, see ROBERT G. DUNBAR, *FORGING NEW RIGHTS IN WESTERN WATERS* (1983).

<sup>73</sup> JOHN WESLEY POWELL, *REPORT ON THE LANDS OF THE ARID REGION OF THE UNITED STATES* (Wallace Stegner ed., 1962); see STEGNER, *supra* note 1 (chronicling Powell's exploration of the West). Donald Worster has assessed Powell's 1878 Report as "a model of ecological realism in an unsympathetic age of unbounded expectations." WORSTER, *RIVERS OF EMPIRE*, *supra* note 3, at 133.

Mormons arrived in Utah, they reacted to the shortage of water by organizing projects that benefited the community first and individuals second.<sup>74</sup> When Spanish communities moved into the Southwest, they too understood how aridity necessitated sharing and community control; the water rules that they developed remain examples worthy of study.<sup>75</sup> But when California miners began dividing water among themselves, thereby giving rise to the prior appropriation doctrine, they thought of themselves and of their immediate wants. They thought not of long-term communal needs nor of the harsh plight of those who came too late, but of their own potent urges to keep all that they could grab. To the extent aridity gave rise to prior appropriation, it was by encouraging water users to act fast and be selfish.<sup>76</sup>

In the settled East, by way of useful contrast, water law grew in a place where community did count, even during the individualistic Age of Jackson.<sup>77</sup> The natural-flow theory barred riparian owners from diminishing the quality or quantity of a water flow through recognition that other people lived downstream.<sup>78</sup> When the reasonable-use theory of riparian rights came along, banning water uses that were unreasonable under local circumstances, it called for assessments of alternate water uses, competing needs, and opportunities that might exist for conservation and accommodation.<sup>79</sup> There were, to be sure, good reasons why riparianism fit poorly with Western circumstances, principally that many early disputes arose on federal lands; because neither plaintiff nor defendant held clear

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<sup>74</sup> For a description of Mormon irrigation techniques, see WORSTER, *RIVERS OF EMPIRE*, *supra* note 3, at 74-83; LEONARD J. ARRINGTON, *GREAT BASIN KINGDOM: AN ECONOMIC HISTORY OF THE LATTERDAY SAINTS, 1830-1890*, at 51-54 (1958); WORSTER, *THE WEALTH OF NATURE*, *supra* note 3, at 112-17.

<sup>75</sup> See MICHAEL C. MEYER, *WATER IN THE HISPANIC SOUTHWEST* (1984); Peter L. Reich, *The "Hispanic" Roots of Prior Appropriation in Arizona*, 27 ARIZ. ST. L.J. 649 (1995).

<sup>76</sup> Water uses in the West tended to be more consumptive than those in the East. Carol M. Rose, *Energy and Efficiency in the Realignment of Common-Law Water Rights*, 19 J. LEGAL STUD. 261, 290-94 (1990). This difference, however, does not diminish the importance of the relative weights attached to community in the processes of water rights definition and allocation.

<sup>77</sup> For studies of the origins of riparian rights, see, e.g., Horwitz, *supra* note 41, at 34-42; Rose, *supra* note 76; T.E. Lauer, *Reflections on Riparianism*, 35 MO. L. REV. 1 (1970); T.E. Lauer, *The Common Law Background of the Riparian Doctrine*, 28 MO. L. REV. 60 (1963); Samuel C. Wiel, *Origin and Comparative Development of the Law of Watercourses in the Common Law and in the Civil Law*, 6 CAL. L. REV. 245 (1918).

<sup>78</sup> See TARLOCK, *supra* note 4, § 3.12[1]-[3]. The environmental sensitivity inherent in natural flow is considered in Lynda L. Butler, *Allocating Consumptive Water Rights in a Riparian Jurisdiction: Defining the Relationship Between Public and Private Interest*, 47 U. PITT. L. REV. 95, 165 n.85 (1985). Hawaii temporarily readopted the natural flow version of riparian rights because of its usefulness in dealing with waterway degradation. *McBryde Sugar Co. Ltd. v. Robinson*, 504 P.2d 1330 (Haw. 1973), *cert. denied*, 417 U.S. 976 (1974). The story is told briefly in TARLOCK, *supra* note 4, § 3.16, and in more detail in Douglas W. MacDougal, *Testing the Current: The Water Code and the Regulation of Hawaii's Water Resources*, 10 U. HAW. L. REV. 205, 208-10 (1988).

<sup>79</sup> For a discussion of the reasonable use rule, see TARLOCK, *supra* note 4, § 3.12[4].



title to riparian federal land, neither could assert riparian rights.<sup>80</sup> But this happenstance of wide-spread federal landowning, like the potent reality of aridity, only partially explains the form that prior appropriation law assumed. What most distinguished East and West were the varied weights that they attached to the community and its underlying values. Prior appropriation was a doctrine suited for the individual rather than the group; for the loner out on the frontier; for the self-centered, grab-it-now exploiter; for the developer who cared nothing about land health. And to an unfortunate extent, it still is.

In their dogmatic stories about the origins of Western water law, economists sometimes suggest that prior appropriation arose chiefly to provide the kind of clear water-use entitlements that are (it is claimed) so vital in an arid land.<sup>81</sup> But many water-allocation schemes give rise to clear entitlements, including the natural-flow version of riparian rights. Prior appropriation in its inception was not primarily a matter of crystals over mud, to use Professor Carol Rose's terminology.<sup>82</sup> More than clarity, Western water users sought escape from responsibility. They wanted, and largely got, the power to generate substantial external harms for which they faced no liability. What most characterized prior appropriation law as first developed was its considerable, if indeed not shocking, tolerance of external harms. Far from being efficient in free-market economic terms, prior appropriation is highly wasteful. It is a system, not for the efficient-market theorist, but for the libertarian whose distorted individualism so deliberately shirks communal responsibilities.<sup>83</sup>

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One of the challenges that a culture continually faces is to distinguish between the sacred and the profane. If the modern environmental movement has added, not just to our storehouse of knowledge, but to our more

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<sup>80</sup> Eric T. Freyfogle, *Lux v. Haggin and the Common Law Burdens of Modern Water Law*, 57 U. COLO. L. REV. 485, 489-91 (1986).

<sup>81</sup> See, e.g., Anderson & Hill, *supra* note 72, at 176-78; Stephen F. Williams, *Transforming American Law: Doubtful Economics Makes Doubtful History*, 25 UCLA L. REV. 1187 (1977) (book review). For an historical inquiry, see Donald J. Pisani, *Enterprise and Equity: A Critique of Western Water Law in the Nineteenth Century*, 15 W. HIST. Q. 18 (1987).

<sup>82</sup> Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 577-78 (1988). The term "crystals over mud" is used to describe the need for clarity in property laws. *Id.* at 577-78; see generally Freyfogle, *supra* note 11 (considering the practical need for clarity in property law); see also Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529 (1989) (showing evidence of a trend away from clarity in California).

<sup>83</sup> See, e.g., John S. Harbison, *Waist Deep in the Big Muddy: Property Rights, Public Values and Instream Waters*, 25 LAND & WATER L. REV. 549, 535-540 (1991) (arguing that any modification of existing water rights via the public trust doctrine is a taking requiring compensation). For libertarian perspectives, see Bruce Yandle, *Escaping Environmental Feudalism*, 15 HARV. J.L. & PUB. POL'Y 517 (1992); John McClaughry, *The New Feudalism*, 5 ENVTL. L. 675 (1975). For a thoughtful critique, see Michael C. Blumm, *The End of Environmental Law? Libertarian Property, Natural Law, and the Just Compensation Clause in the Federal Circuit*, 25 ENVTL. L. 171 (1995).

precious and hard-earned supply of wisdom, it has done so by reminding us that much ground exists between these two poles. Like other parts of nature, water partakes of both realms, the sacred and the profane. It is part garden and part machine, part idol and part tool. If water is not as morally worthy as we human beings, neither is it some inert object that gains value only by human grace. If it is separate and distinct from us, it is also an essential part of something far larger, something of which we too are a part and on which we fully and ultimately depend.<sup>84</sup>

The most damaging fault of prior appropriation law, and of the water-rights mentality that defends it, lies in its too exclusive focus on the profane and utilitarian. Water rights can stay, but mixed with water law's exaltation of the individual and the private must come ownership norms that reflect water's other side: norms admitting that water is more gift than human creation; norms recognizing that water supports all of nature, not just humans; norms recognizing that our understanding of water is matched, if not greatly exceeded, by our ignorance of it; norms that value water, not just for its usefulness, but for its enduring, inscrutable mystique.

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<sup>84</sup> One reason we have such trouble understanding Native American spirituality is precisely because we cannot readily see how an earthly object, particularly one that we put to hard use, can possess spiritual traits.