

# Let Us Drink Our Fill: The History of Water and Its Impact on Resource and Environmental Management

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Jim Salzman's *Thirst: A Short History of Drinking Water*<sup>1</sup> tells a remarkable story about how we have managed one of the most important substances in our lives, and through its historical tales, may also point to a way to think not only about water management, but also about the management of all kinds of resources—a management strategy that is not defined by the resource, but instead, the resource's ultimate use.

Up until this time, those who study environmental pollution have generally focused on resource management (and in this I include resources that can be despoiled by pollution, such as clean air) based on the resource itself, i.e. how should we best manage water, or air, or animals, or land generally. With many of these natural resources, management strategies have been driven by concerns of common overuse—the tragedy of the commons.<sup>2</sup>

Thus, much of the legal analysis of resource use has focused on how to correct the commons problem so that we all get appropriate economic signals to avoid overuse. In the environmental law arena, the market's failure to internalize costs, which results in the tragedy of the commons, is given as the main justification for government intervention into the private marketplace—we have to control how much pollution one can put into the commons because the polluters have no incentive to do so themselves. We have to choose the best management strategy to correct this market

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1. See James Salzman, *Thirst: A Short History of Drinking Water*, 18 YALE J.L. & HUMAN. 94 (2006).

2. Carol Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 3 (1991) [hereinafter Rose, *Rethinking*].

problem. Many of us have grappled with theories of which kind of intervention would best correct the overuse of resources. One of the most important contributors to this field is Professor Carol Rose, who has analyzed various methods of pollution-control strategies and drew conclusions about intervention choice based on the overall pressure faced by a resource.<sup>3</sup> Importantly, she focused us not just on the effect a strategy would have on the resource itself, but its costs for the regulated community and costs for the government to enforce the strategy.<sup>4</sup>

From the work that built on this insight and its application to the real world (i.e. when should market strategies be used as pollution control mechanisms), we have been able to see that management strategy “effectiveness” is not the only issue that is of concern. Important work on control strategies for resources has thrown a spotlight on a far more fundamental question: Is correcting the market mechanism the only question that we need to ask when we decide how we should regulate our natural resources? Or do other issues exist as well? In particular, I have focused on the question of whether we should have a right to certain resources outside of our ability to turn the resources into property that we can afford to keep.<sup>5</sup> And if we do have a right to certain resources, what is the intellectual or philosophical justification for that right?<sup>6</sup>

Professor Rose, whom we honor in this symposium, has always looked beyond economic efficiency in her work. Because of this, Professor Salzman’s paper is both a wonderful contribution in its own right as well as an extension of Professor Rose’s own work. Professor Salzman explores the history of drinking water to help answer one of the important questions posed by the privatization and re-publicization of drinking water in Cochabamba, Bolivia: who should have access to drinking water and why? I think answering the questions of “who?” and “why?” will be necessary in order to address all future resource and environmental problems. Optimal regulatory strategies may change depending on the cost of goods and technology,<sup>7</sup> or they may conflict with each other.<sup>8</sup> They may also suffer from inherent problems in their diffuse nature and in the asymmetry of political pressures.<sup>9</sup> But if we ground our regulation of

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3. *Id.*

4. *Id.*

5. See generally Victor B. Flatt, *This Land Is Your Land (Our Right to the Environment)*, 107 W. VA. L. REV. 1, 10 (2005).

6. Others reach the same rights question through analyzing regulatory mechanisms and noting that these mechanisms determine rights. See Daniel Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 117, 136 (2004).

7. Daniel Esty, *Next Generation of Environmental Law: A Response to Richard Stewart*, 29 CAP. U.L. REV. 183, 190 (2001).

8. J.B. Ruhl & Jim Salzman, *Mozart and the Red Queen: The Problem of Regulatory Accretion in the Administrative State*, 91 GEO. L.J. 757 (2003).

9. Richard Lazarus, *Judging Environmental Law*, 18 TUL. ENVTL. L.J. 201, 208 (2004).

resources and the environment in principles of who, if anyone, has entitlements to them, we can preserve access to a resource as a basic human right, even as implementation inputs change.<sup>10</sup> Poorly defined rights do not benefit society overall,<sup>11</sup> and being clear about these questions can help us avoid the use of technological or method debates to hide values debates.<sup>12</sup>

Both Professors Salzman and Rose recognize the importance of history in helping us answer these questions.<sup>13</sup> To the extent that circumstances are similar, patterns of resource use, and indeed laws in general, that have been tested in the crucible of history may suggest the most successful way to address a particular problem or issue.<sup>14</sup> It is on this basis that I have recently asserted that a right to certain resources and to freedom from pollution exists in statutory law because it replicates common law entitlements.<sup>15</sup> Professor Salzman's examination of past water use supports the idea of a "right" to basic environmental resources and illustrates a way to successfully manage this right.

I think the tentative conclusion that Professor Salzman draws from the case histories of drinking water is correct—that water should not necessarily be managed as either a private commodity or a public right, but sometimes as both.<sup>16</sup> But this excellent analysis, I believe, provides a different way of coming to the same conclusion about water and a new key to helping us understand how best to address resource use and environmental amenities in general. Though I cannot examine all of the ramifications and applications of this theory in this symposium paper, I would like to explain my thesis and illustrate why I think it may be very valuable.

The case histories set out in Professor Salzman's paper definitely demonstrate for water (and I would assert other resources) that questions of entitlement and management may depend not on the nature of the resource itself, but instead on the use to which the resource is being put. In other words, we should think about water based not on the total amount of the resource itself, but on whether water is used for drinking and survival or used as a market input. In effect, we might be talking about two different resources, albeit ones that are physically identical. Professor Salzman alludes to this distinction in discussing the nature and history of

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10. Esty, *supra* note 7.

11. Jim Salzman, *Creating Markets for Ecosystem Services*, 80 N.Y.U.L. REV. 870, 930 (2005).

12. See generally Victor B. Flatt, *Saving the Lost Sheep (Bringing Environmental Values Back into the Fold with a New E.P.A. Decisionmaking Paradigm)*, 74 WASH. L. REV. 1 (1999).

13. Carol Rose, *Romans, Roads, and Romantic Creations*, 66 SPG LAW & CONTEMP. PROBS. 89, 99 (2003) [hereinafter Rose, *Romans*].

14. See generally Flatt, *supra* note 5, at 10.

15. *Id.*

16. Salzman, *supra* note 1, at 119.

water, and I think it deserves to be discussed further.<sup>17</sup>

In the historical examples cited by Professor Salzman, when water is used for drinking or directly for human survival, access is universal, from the Right of Thirst in Jewish and Islamic law, to access in ancient India to East Africa.<sup>18</sup> Even when water was dealt with differently, for instance when it was treated as a commodity in Ancient Rome, there was still free access to water for drinking.<sup>19</sup> From our current way of viewing resources, we might think this surprising since we know that water is a scarce resource, and economic theory would suggest that we must manage it as such—without giving free access. However, if we recognize *drinking water* as different from water, we see that we can both acknowledge drinking water's special status as a human right and still understand how water in general can be managed to avoid the tragedy of the commons. This is the beauty of history. Without ever having to consciously acknowledge theories such as “rights” or “economic overuse theory,” historic customary and legal systems both acknowledged and respected rights and entitlements, and did so in a way that was consistent with modern economics' theories of selfish human behavior. I believe that the concept of distinguishing resource control based on the resource's use is an idea that society would do well to implement for all resources, and Professor Salzman's work on water proves this more robustly than what I have been able to do through an examination of the development of common law.<sup>20</sup> Let us examine how water illustrates this principle so well.

If we think about the nature of resources pressured by overuse, the fact that there can be universal right to access drinking water should come as no surprise. To the extent that water is *only* used for drinking, it is not under any particular pressure from overuse; and in such a situation, as noted by Professor Rose, the most logical way to deal with the resource is to “do nothing.”<sup>21</sup> In terms of availability for drinking, global freshwater supplies have historically always been sufficient.<sup>22</sup> Human beings would only settle in areas in which drinking water could be secured. Otherwise, they would leave. If water supplies dried up, humans would either have brought more in, or more likely have already left, since the ecosystem, which depends upon water, would have become hostile. Even today, as we discuss human habitation on the moon or Mars, we talk about the need for a water supply—rarely is it discussed as an amount of water. If it exists,

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17. *Id.*

18. *Id.* at 99-103.

19. *Id.* at 104.

20. *See generally*, Flatt, *supra* note 5, at 11-19.

21. Rose, *Rethinking*, *supra* note 2, at 15.

22. Robert Glennon, *Water Scarcity, Marketing, and Privatization*, 83 TEXAS L. REV. 1873, 1896 (2005) (noting that basic human needs could be between 6.5 and 13 gallons per day, a trivial amount of water).

there should be enough drinking water for human consumption, period. Because the truth is, in terms of base survival, humans do not need or use that much drinking water. If humans are settled in appropriate places, there is obviously enough drinking water on earth for 6 billion or 50 billion humans.<sup>23</sup> Nor do we ever have to worry about a problem of overuse of water that is for drinking, for humans cannot “overdrink” water, in the same way that their cattle or sheep can overgraze the common field. One human can only hold so much water, and there are far more immediate limiting controls on population, such as food; it is the limiting resources that we have to worry about, not water.

I do realize that as a practical matter, there are many important caveats to this assertion. For one, we know that there are currently many people in the world who live in areas that do not have clean water, but water from which they might contract disease. But this issue is not really the availability of water that could be used for drinking, but the overuse of water for waste disposal, whether human or industrial.

It is also fair to assert that water purely for drinking does not perhaps encompass all of the water uses necessary for human survival, or certainly not all uses desirable for human life. Many of us depend on water to carry away wastes, and obviously water is necessary for all of the agriculture and animal husbandry that provides our food. But I do not think any of these facts detracts from the focal point about the relative abundance of drinking water compared to water for other uses. In other words, if we corrected the commons problem by making water an economic commodity for non-drinking purposes (as a cheap way to dispose of waste for instance or to provide food), we would not have a shortage of water for everyone to drink. Though these other uses may be important to humans (as food is), they essentially are economic inputs into production, and even the availability of food in its modern sense (indeed since the introduction of agriculture at all), is subject to the same rules of availability as any other commodity. Historically, humans have never had universal access to enough food; instead, human population growth has been limited by this commodity, just as it has limited population growth for most animals.<sup>24</sup>

There can also be artificial constraints. Drinking water availability could be (and has been) used as a tool in warfare or for political manipulation, but these constraints do not alter the basic argument that there is plenty of drinking water to support the entire human population.

So at least when used for drinking, water *can* be available to all without

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23. *Id.*

24. It should be noted that though, historically, humans have only located where there is access to drinking water, in the modern era, people may locate where water can be brought in. It may be brought in because it is a commodity. Nevertheless, this does not change the historical treatment of water for drinking as a right vs. water in general as a commodity.

exhausting the resource. This is an important observation indeed. If generalizable to other resources, it seems that if we respect history we really are in the best of all possible worlds, with respect to recognizing rights and having systems in place that can allow for the recognition of those rights without imperiling the survival of the species as a whole. We are not going to “overgraze” the commons that is necessary for the flourishing of the human species. This should not surprise anyone. In biological evolution (and in certain theories of cosmological evolution), it is a truism that anything necessary for survival will be present for those species that have survived. Over long enough time spans, the same holds true for legal systems.<sup>25</sup> Just as species’ survival depends on biological laws, so does societal survival depend on human behavior norms. The attempt to channel or control those norms is reflected in legal evolution.<sup>26</sup> Moreover, additional positive effects of water as a right have also evolved. As Professor Rose has noted, a plentiful resource may foster beneficial relationships that can serve other collateral functions.<sup>27</sup> Water is just one kind of available good that can help bridge distrust between cultures.<sup>28</sup> Relationships formed from abundance should not be discounted, and water is the *sine qua non* of this principle.

The fact that there are overuse and shortages of water that is *not* used for drinking necessarily implies that water for other uses should not be treated as a right, but instead be priced as a commodity. Professor Salzman’s history supports this distinction, which also fits our societal needs and wants. Under ancient Jewish and Islamic law, strangers were only allowed water if necessary for immediate survival.<sup>29</sup> Other uses of water for those outside the “limited commons property” (as Professor Rose would call it) were priced more as commodities or managed as a resource where only certain people had access.<sup>30</sup>

So one conclusion that we can draw from Professor Salzman’s historical examples is that we have an historic right to drinking water, but not necessarily an historic right to water for other uses (including agriculture and animal husbandry), at least when the resource is threatened by overuse. So, if we wish to use these historic lessons for modern times, we would want to have systems whereby drinking water (and perhaps small

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25. Flatt, *supra* note 5, at 10.

26. *Id.*

27. Carol Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 134 (1997) [hereinafter Rose, *Futures*].

28. The shared interest in a sport (which can be a form of resource that is not congested) contributed to the U.S. “ping-pong” diplomacy with China in the early 1970s. Other cultures have shared interests and rituals over water-related goods such as tea or coffee.

29. Salzman, *supra* note 1, at 100.

30. Within the local community all water was a commons, but it was property to outsiders, a form of resource use discussed by Professor Rose. See Rose, *Romans*, *supra* note 13, at 107-08, and Rose, *Futures*, *supra* note 27, at 131.

amounts for other immediate human uses like bathing or cooking) would be considered a right, while water for all other uses would be considered property. Doing so would not interfere with universal access to drinking water but would head off shortages of water that is used as a production input. If we wanted people to use water for production effectively, that would mean that we would need to “price” it appropriately.

The problem obviously comes in the practicality of this distinction, for even if we wish people to have a right to water for drinking and no right, but a requirement, to purchase water for other uses as a production input, the fact remains that we are dealing with the same product, albeit for different uses. Maintaining access for drinkers but not for other users may not always be easy. But in fact, this does not necessarily have to be so. History demonstrates again and again that as human behavior changed in response to input and availability of resources, legal norms evolved to preserve this differentiated access. This is illustrated by the Roman legal systems Professor Salzman describes.<sup>31</sup>

You will recall that the Romans came up with a way to practice market segmentation. They were able to provide water for drinking and small scale home use (which could be considered a survival use), while at the same time charging for that same water when it was used in ways not as necessary to human survival.<sup>32</sup> Let us examine how they did this. What kept those who used water for other uses than “survival” from taking the drinking supply from those who did? For logically, if some user has to pay for water and another does not, the paying user would rather have the free water and would have an incentive to try to take it.

In Rome, the market segmentation primarily occurred at the access point. The water that was used primarily for drinking had at least two characteristics that protected it from overuse. One, it was somewhat more difficult to get than the same water that was sold to houses through the piping system. Water at the fountain had to be gathered and moved. This served as a wonderful way to segment the market. Water for drinking could be gathered at a common fountain without too much difficulty because the amounts needed were small. The more that a person wanted to take (which would occur the more the water was used for anything beyond mere survival or basic needs) the harder it would become to gather it. At some point, the cost of carrying large amounts of water to use for things other than survival (for private fountains and pools, irrigation, gardens, continuous toilets, etc. . . .) would exceed the cost of getting the water piped directly into the home.

Additionally, there was an effective enforcement mechanism. The

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31. Salzman, *supra* note 1, at 103-06.

32. *Id.* at 104-05.

fountains were public. Anyone could see who was using the water and anyone would have an incentive to report overuse, which might occur, for instance, if someone tried to put a piping system into the fountain to carry water to their home.

The same lesson is illustrated in the London and New York examples, except in those cases no one had set up an effective system to discriminate between the users so that those who did use water as a commodity would pay for it, and subsidize the others. One could imagine that at some point in time, both London and New York would have been (and in fact did become) rich enough to have enough people willing to pay for water as commodity (for industry, plumbing, pools, and vanity uses) that they could have replicated a similar system as Rome. The fact that they did not is probably because the government did not come up with a way to, or the idea of, segmenting the market. Both cities had to slog through decades of substandard water for *all* uses because the people who used water as a commodity (such as for raw sewage and industry) were using it without paying for it, thus creating shortages of clean water for drinking. Even today, in modern developed cities, we still do not have the sublime market segmentation for water that was practiced by the Romans. Instead, all users tend to pay for water as commodity and right: commodity since we pay for it at all, and right since this payment is subsidized by the government.<sup>33</sup> It is in fact the largest users that often pay less for water because of certain volume discounts.<sup>34</sup> However, this might not be a huge problem in developed countries for the simple reason that all who have a right to water can “afford” this pricing system. For the vast majority of the population in developed countries, water is cheap enough to hardly be noticed.<sup>35</sup> For the truly poor, it is a rare developed location where clean water is not available for drinking free of charge.

But the Rome, New York and London histories do still have important lessons to teach about the provision of water in developing countries, and indeed the provision of resources in general. If we wish a developing location to have access to safe drinking water, history shows that the legal regime must play a role. It needs to price water for some and not others, and legally control access to produce the market segmentation that was present in Rome. Large users (including those who use water as a commons dump) must be required to pay for that use, either directly or by regulation, forcing them not to use it for certain purposes (such as a waste commons). This of course requires a functioning and effective government.

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33. Glennon, *supra* note 22, at 1883.

34. Salzman, *supra* note 1, at 94.

35. And where not, there is a tendency to push back against commodity users, such as the call for California to require payment for agricultural water to reduce pressure on domestic uses.



Another important lesson from Rome that Professor Salzman noted is that water as a commodity facilitated the availability of water as a right for drinking.<sup>36</sup> This may have to come into play if we are to retrofit our major urban centers in developing countries with drinking water as a right. In the Cochabamba example, charging higher rates to those hooked up to the system (or some of those hooked up to the system) could have been used to subsidize small amounts of water for domestic use for the poorest in the area who had been buying water from private vendors. This might still have been more inconvenient than having water delivered through pipes directly, but better than an expensive and unreliable supply.

The rioting at Cochabamba may indicate that at least some of the users who had water piped into their homes were very price sensitive, and this points to the problem with subsidization without any way to pay for it (a problem with many commodities).<sup>37</sup> In our urbanized world, where people have concentrated based on an assumption of water availability but where not everyone can drill wells to get water for free, the ability to provide the "water right" to all may be facilitated if there is enough demand for water as commodity to subsidize the drinking use. I am not an expert on urbanization or on government policies which have led to over-building and improper price signals in certain areas, but it seems to me that this could still provide a way to at least think about how to solve the water problems in the developing world.

The history of water may provide lessons for more than just water use. The same ideas about basing a resource's management and accessibility on its use are generalizable to many resource and environmental issues. Much of our pollution problem can be seen as the use of one resource (air or water) for both survival and natural amenities and for commodity use. Much as in the issue of drinking water, air for survival cannot be overused. No amount of persons we can anticipate could possibly impact the provision of clean air for all simply by breathing the air. However, those who use air as a commodity can have such an impact. One factory on the edge of town might use so much air (to dispose of waste) that it prevents one million people from breathing properly. Professor Salzman himself has been one of the leading commentators on the importance of valuing ecosystem services, and they too could be addressed by this analysis.<sup>38</sup> Natural systems doing their natural jobs of purification and provision of benefits (which have been sublimely tuned over time) are generally not in danger of overuse. But when harvested as commodities (for waste or products), they can be overused and may need to be thought

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36. Salzman, *supra* note 1, at 104-05.

37. Robert Glennon explores the variables of Cochabamba more explicitly in his article on water scarcity. See Glennon, *supra* note 22, at 1891.

38. Salzman, *supra* note 11.

of as a property commodity.

Such a way of thinking about clean air and clean water and other resources is consistent with the history that Professor Salzman has outlined and others have explored. If we believe that our history can reflect social goods,<sup>39</sup> this provides another path to answering the question that we have begun to ask: do we have a right to environmental amenities? This is a post-economics way of thinking about the environment in that it rejects the notion that all statutory environmental intervention is about creating a system in which the environment is property so as to avoid the tragedy of the commons. Instead it more broadly posits that statutory law may be necessary to mimic what the common law itself has done, which is to not only create and protect a property system, but also to create a system of values and rights which respect human behavioral norms. As I have noted in an earlier paper, this also has implications for how these statutes should be administered and Professor Salzman's history points up the same lesson.<sup>40</sup>

While I do not have time in this comment to flesh out all of the implications of treating environmental amenities as "right" or "property" depending on use, we can touch on some of them. For instance, as is the case with water, environmental amenities with a dual nature must be managed in ways that allow for use (or user) discrimination. Without considering other values at the moment, those that are using the air for basic human necessity such as breathing must have free access to clean air, while those that use it as a commodity cannot interfere with that right, and must also then pay for any way that they use the air to avoid over-consumption (since we already know that it is a congested resource). How would we do that? Well it would most certainly mean that people who use air for a commodity must be forced to curtail their use to the extent that it infringes on the air as right requirement, and that they should be the ones to pay for that determination. This means that the polluter should pay for use, for monitoring of that use, and for any harm that use causes, and should not necessarily have a vested right (or grandfathered right) in air use if it interferes with the air as right. Thus, the principle could be a powerful counterweight to pollution sources' lobbying which continues to argue for being treated more "fairly," and for the government and the public to shoulder some of the burden of their pollution, either in administration or the cost of pollution itself.<sup>41</sup> As noted by Richard Lazarus, the political forces for and against environmental protection are not balanced, and if we rethought environmental protection as a system of

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39. Flatt, *supra* note 5, at 10.

40. *Id.* at 31-41.

41. Esty, *supra* note 6.

balancing rights versus infringement of those rights for commodity use, it might take much of environmental law out of the political arena, and put it in the hands of judges, who, Professor Lazarus has suggested, are better at dealing with environmental issues.<sup>42</sup>

Putting the cost of management on polluters may also argue against a “property system” for environmental regulation because of such a system’s high administrative costs, which would be borne by the people. A property system could respect this right if it could be set up so that the costs of administration were borne by the polluters. Recognizing a right to the survival use of a resource would also favor process controls or command and control over market controls for the same reason informing the Roman water system. It is easier to see the cheating in such a system and provides the appropriate incentive *not* to use air that is meant for breathing.<sup>43</sup> As pointed out by both Professor Rose and Professor Esty, such regulatory systems that can cheaply distinguish between resource users may get easier with better technology.<sup>44</sup>

This also provides another explanation for why control of point sources of pollution is typically so much easier than non-point sources. Point sources are like the people who want to tap into the fountains in Rome to use water for commodity purposes—they are easily identified and controlled.<sup>45</sup> Non-point pollution is much more like a stealth user; it is harder to trace.<sup>46</sup> Non-point source controls have focused on land uses or best practices and this may be one way to control use, but we need to think more about how we can make non-point source pollution like point source pollution for purposes of regulation—i.e. make it obvious and easily deterable.<sup>47</sup> Or there could be structural solutions. One example of this is the use of moral suasion which Professor Rose recognized as an important regulatory mechanism.<sup>48</sup> Just as the users of water at the Roman fountain could chastise the people who wanted to put a private pipe into it to draw the communal water away, people who see folks produce run-off that is

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42. Lazarus, *Judging Environmental Law*, *supra* note 9; Richard Lazarus, *The Pragmatic Ecologist: Environmental Protection as a Jurisdynamic Experience*, 87 MINN. L. REV. 999, 1001 (2003). This theory may also be brought to bear on other seemingly complex questions of what is or is not property. For instance, focusing on the use of something may allow a way of thinking about cultural assets so we do not (as Professor Rose puts it) “throw the baby out with the bath water.” Carol Rose, *Property in all the Wrong Places*, 114 YALE L.J. 991, 993 (2005).

43. Although the easier it is to trace harms by making interference with the right visible, the more we can move to different systems if they preserve the distinction between right and commodity. *See* Esty, *supra* note 6, at 115.

44. *Id.*; Rose, *Futures*, *supra* note 27, at 138.

45. Victor B. Flatt, *Spare the Rod and Spoil the Law: Why the Clean Water Act Has Never Grown Up*, 55 ALA. L. REV. 595 (2004).

46. Esty, *supra* note 6, at 162, 192.

47. Daniel Esty has correctly noted that technological improvements may make this analysis less costly and more plausible. *Id.*

48. Rose, *Rethinking*, *supra* note 2 at 29.

obviously bad or pour hazardous chemicals down the storm sewer might be able to discourage those “commodifiers” by shaming.

But however it is accomplished, the most important principle may be naming these individually human uses of environmental amenities as a right. We seem to be moving in a direction away from this as many environmental policy makers simply discuss all environmental amenities for any uses, including drinking water, as a commodity. Professor Salzman’s history illustrates the workability of a strategy where, depending on its ultimate use, we can designate some goods as freely available to all while not overusing them, and the Cochabamba example may represent the morality of that same strategy. Failure to recognize this distinction so as to protect the provision of drinking water for all may not only be morally problematic, but as our history shows, harmful to all. Without entitlement to basic environmental values, we fail to protect the person, which is necessary for wealth creation.<sup>49</sup> As Professor Rose stated in her close examination of how some rights and property regimes had been ignored, “[S]ome of this pattern could easily be characterized as a redistribution from producers to vandals, thieves, and freeloaders—hardly an efficient outcome.”<sup>50</sup> Let us not get to the point described by Professor Rose where individuals wanting basic human inputs, such as clean air and clean water, are “deemed inappropriate to make claims of entitlement.”<sup>51</sup>

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49. Flatt, *supra* note 5, at 16.

50. Rose, *Futures*, *supra* note 27, at 143

51. *Id.* at 141.