

Chapter 1

The Sacred Gifts of Nature

Introduction

We are each born into a world that is full of “the gifts of nature.” Although we reconfigure them for our uses, the raw material is there, prior to any human labor. Philosophers and social scientists often lose sight of this fact and focus exclusively on human relationships. When we stop taking nature for granted, our place in it is not as clear as one might think.

In the following essays, I reflect on how we should respond to the gifts of nature. The way we organize our institutions in response to that query largely defines what kind of society we will have. Some cultures or ideologies treat nature with awe and reverence and classify some elements of it as sacred. Others have entirely demystified nature and make use of it unreservedly to serve human ends. Environmental consciousness has made us all aware of the harm we create by treating nature without respect: large-scale loss of species, deforestation, chemical pollution, climate change, and the emergence of new diseases as a result of landscape changes. A century of intensive study of natural systems has revealed their often paradoxical character, making management far more complex than the engineering mentality often recognizes.

Environmentalism has become a new religion for many of its adherents, particularly for those who embrace deep ecology. According to the principles of deep ecology, all living things have value in themselves, and there is no basis for ranking the moral worth of one species as greater than another (Næss 1989). This sort of moral egalitarianism may appeal to anyone who is sickened by the idea of replacing rainforests with soybean plantations or by the almost complete drainage of wetlands in California that used to host 100 million migratory birds. But it is full of logical flaws. First, no species can have equal value with its predator, since all predators eat large numbers of prey during their lifetimes. Second, since no species except humans applies moral categories to predation, the very act of making this sort of moral determination sets humans apart, thereby contradicting the premise. Third, it is inappropriate to see individual species as the moral units in

nature, since ecosystems are probably the more relevant category. Finally, it would mean putting human life on a par with *Anopheles gambiae* mosquitoes (the kind that carry malaria) or *Aedes aegypti* (the primary vector for yellow fever), a self-sacrificial choice that no one has proposed the mosquitoes themselves adopt. To deny the greater relative value of humans does not mean we should then treat nature with abandon; it means simply that there are reasons for valuing higher orders of experience more than less complex forms. We might, nevertheless, take heed of the radical precepts of deep ecology by at least favoring a Franciscan view of "brother sun, brother moon" rather than the injunction in Genesis to "have dominion over the earth."

The universalism of radical environmentalism is admirable, and the day may yet come when the mythic elements in the Gaian religion will become the cultural norm, thereby superseding the human desire for self-preservation and concern for one's own offspring. Patriotism has convinced many a parent to send children to war, so the moral suasion of deep ecology could yet win out.

Until there is a political constituency that favors dismantling civilization and allowing forests to displace cities, the precepts of radical environmentalism are unattainable, at least within a democracy. That is why perfectionist environmental goals are counterproductive. As the saying goes, "the perfect is the enemy of the good." In this case, the "good" consists of achieving the less lofty goals of Aldo Leopold and Rachel Carson, which will still require a reversal of policies that aim at unlimited production and consumption based on wasteful use of natural resources.

To counsel prudence is not the same as giving in to the environmental depredations of fishing fleets with huge nets, energy companies that drill in fragile areas and pump CO₂ and pollutants into the air, chemical and pharmaceutical companies that put wastes in rivers that inadvertently change the hormone balance in humans and other species, corporately managed CAFOs (confined animal feeding operations) that effectively torture animals to squeeze a few pennies extra profit, or policies that encourage farmers to pump ancient aquifers dry. Unfortunately, in the polarized political climate of the world today, we are often told we must choose between extremes, either by adopting the stance that production should be maximized at all costs or by turning our backs on civilization entirely.

The choices that we are faced with today do not fit inside the older political labels of conservative, liberal, progressive, fascist, or communist. None of those ideologies has taken nature seriously, and they tend to denigrate the tribal cultures that integrate natural systems in their way of life. The idea that nature can be preserved while humans are being denigrated is a pervasive illusion in a modern society. Most policies preserve both economic inequality and wasteful appropriation of services provided by nature. We seek an ideology that adequately balances social and natural concerns.

Those who are dissatisfied with the present system are searching for a way to link environmental goals with economic justice. The aim of the new system would be to minimize the impact of humans on nature *and* promote economic democracy. It should widely disperse the ownership and management of natural resources and deprive economic elites of the power over people and nature that they regard as their natural right. Too often in today's world, ordinary people must survive by engaging in practices that are environmentally and socially harmful, practices they personally detest. The object of policy should be to remove the perverse incentives that encourage war production, overfishing, destructive logging or farming, chemical pollution, and similar activities. To achieve that aim will require more than rhetoric and false promises. The new framework will depend on the pragmatic use of instruments that continuously nudge economic behavior to conform to ecological principles.

The Two Primary Options in Contemporary Environmental Practice

It might seem initially that the conflict I am describing is between "environmentalists" on the one side and "anti-environmentalists" on the other, but that is not a useful distinction. Everyone claims to be an environmentalist or a conservationist or nature lover these days, so labels associated with environmentalism do not distinguish relevant categories. The correct position is certainly not a midpoint between environmentalism and anti-environmentalism, because there is no such point. Compromises may be required, but not at that level of generality.

Because there are no adequate labels to describe the positions I wish to delineate, I will invent some terms, with the understanding that these are labels of convenience that enable us to make some analytical

distinctions. Like the classifications in biology that distinguish kingdom, phylum, class, order, and so on, social classification is merely a method of identifying patterns of thought and behavior that groups of people have in common. We do not expect people to use these terms to describe themselves, any more than we expect a woman who walks into a hospital to see a doctor to call herself "an ambulatory patient," even if hospital records use that terminology.

The labels that I am proposing here are to differentiate two categories of people who might each call themselves environmentalists. On the one hand, there are *accommodationists*, whose policies would serve to perpetuate the status quo outside of a narrow band of technical solutions to environmental problems. On the other side are *sacralists*, whose reverence for nature and for the downtrodden members of society would lead to policies disruptive of the existing social and economic order. Not every person I am categorizing as a sacralist talks explicitly about the sacredness of nature, but the language of the sacred is so often used as a way of countering the logic of the accommodationists that it fits a large portion of the group in question. The accommodationists might also be called "stalwarts," "loyalists," "acquiescers," or any number of other terms that suggest a commitment to private property, corporate "partnerships" with government, corporate management of trade, a legal system accessible only to elites, and a narrow spectrum of political debate. The sacralists might also be called "dissenters," "commoners," or "eco-socialists," but none of those labels accurately captures the balance between a reverence for nature and for egalitarian social formations.

A simple example may show how these two categories work and what they signify. If we consider the Roman Catholic Church as a historic institution, it is the epitome of being accommodationist. Its social ideals are still based on the sort of hierarchy of authority that existed in medieval Europe. As a result, most of the conservative political parties of Europe (for example, the Christian Democrats in Germany) have been predominantly Catholic. Traditional Catholic views of nature were almost entirely instrumental and rationalistic, oriented entirely toward the view that humans should have dominion over nature. But Pope Francis (2015: §2) broke with that tradition in many ways and sided with the sacralists by writing:

This sister [Mother Earth] now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her. We have come to see ourselves as her lords and masters, entitled to plunder her at will. The violence present in our hearts, wounded by sin, is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. This is why the earth herself, burdened and laid waste, is among the most abandoned and maltreated of our poor; she "groans in travail" (*Rom* 8:22). We have forgotten that we ourselves are dust of the earth (cf. *Gen* 2:7); our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters.

The pope's explicit connection between the treatment of the earth and the "maltreat[ment] of our poor" signifies a break not only with Catholic doctrines but also with the business-as-usual mindset of both government and business around the world. This does not mean the Catholic Church is suddenly going to change direction. But it does symbolize the conflict that is taking place around us.

The example of the tensions within the Catholic Church shows that there is a conflict between accommodationists and sacralists *within* many institutions. Thus, it is perhaps most accurate to say that both tendencies exist in each institution and individual. Nevertheless, one side in this conflict will generally dominate. In this particular instance, the Catholic Church lies solidly in the camp of the accommodationists, despite the efforts of a reforming pope named after the patron saint of ecology: Francis of Assisi.

The Accommodationists

The accommodationists in every society are at the centers of power. They may write regulations for a government agency, design advertisements for Exxon ("Do people care about nature? People do."), conduct benefit-cost analyses for a well-funded think tank, file lawsuits on behalf of property owners who believe their land was used improperly for public purposes, or carry out a campaign for a conservation group to set aside land for a nature preserve. Their work may be funded by a corporation, a major foundation, or federal or state tax money. In every case, they work *inside* the system to be sure that concern for nature

does not impinge too deeply on the conventions that sustain the existing social hierarchy.

The role of the accommodationist has a long history. Those who served the medieval aristocracy did so by keeping commoners off the fields and forests that were treated by the nobility as private parks. That was the role of the Sheriff of Nottingham, who played the role of a villain in the legend of Robin Hood, when he sought to protect Sherwood Forest by preventing commoners from hunting and gathering wood.

For centuries, aristocrats preserved natural areas without any thought of environmental consequences. They were preserving "their" lands for hunting and fishing and enjoying the view without interference by people they regarded as rabble. We can be fairly certain that this was an almost universal relationship by virtue of the worldwide popularity of the Robin Hood story. The fact that Robin Hood was probably from an aristocratic background himself does not mar the story: for millions of admirers, it remains a tale of resistance against elites on behalf of access to nature by the people.

There is still plenty of evidence in our own time of this aristocratic view of nature. One need only watch a half dozen documentaries about wildlife in Africa or elsewhere to notice the complete absence of the people who have been hunting and otherwise interacting with the animals for millennia. There is an implicit message in most such documentaries: the animals are to be preserved for the sake of the distant observers, just as wildlife was once preserved for the viewing pleasure of nobility. The nature shows are an extension of an aristocratic pastime into a new venue. In those programs, there is never an indication that the aristocratic mentality was responsible for forcing the local people onto miserable land with little water, which is why they may now be "poaching" on the lands they are kept from entering, much as Robin Hood did.

Many contemporary conservation groups inherited those elitist attitudes. Thus, when we turn to the present day in the United States, we should not be surprised that large conservation organizations (the National Wildlife Federation, World Wildlife Fund, Wilderness Society, Trust for Public Land, African Wildlife Foundation, Defenders of Wildlife) and environmental organizations (Environmental Defense Fund [EDF], the Natural Resources Defense Council) have been cut from the

same elitist cloth as the groups that defended aristocratic privilege in the past.¹ Even broad-based organizations like the Sierra Club, Greenpeace, and 350.org have upper-middle-class constituencies and seldom propose policies that might contribute to a realignment of wealth and power. For example, most large environmental groups have acquiesced to corporate schemes in international negotiations over climate change policies—programs that permit businesses to make a profit on both current and previous emissions through complex systems of permits and offsets.

Other modern accommodationists are complicit in sustaining the system of aristocratic privilege, even when they call for regulations to limit the new elite from creating too much damage. The majority of think tanks and NGOs, across the political spectrum, refrain from questioning the conditions that allow businesses to accumulate ownership of water, land, forests, and minerals, effectively controlling many economies around the world.

Another part of the professional class that has done the bidding of elites is the legal profession. Its original function in European history was to formulate and codify feudal law, thereby providing the nobility with legitimacy for their actions. In the 19th century, lawyers provided a rationale for displacing people from their land in Africa, Asia, and the New World to create hunting reserves and national parks or mines and plantations, according to the wishes of their masters. Whether the elites are after higher profits on investment or maintenance of animal parks for their leisure activities, the lawyers are there to draft the contracts and memoranda that drive people off their land. If the elites really cared for the land for which they profess a feeling of reverence, they would have left intact the cultures that had been sustaining both wilderness and sustainable economies for centuries, often with their own sense of reverence toward the land.

The economics profession is one of the later additions to the alliance of accommodationists. There are three crucial features of economics training that account for the overwhelming support most economists lend to powerful interests: 1) the uniform allegiance to the ultimate value of efficiency, judged solely in terms of labor productivity (ignoring productivity from nature), 2) the widespread silence about the legitimacy of ownership or "initial entitlements," and 3) the cultivation of an

inability to distinguish between value that comes from nature and value that comes from human action. With those three operating principles, neoclassical economists have gone forth into the world as the guardians of the status quo and given it their blessing. As a result, those economists have developed sophisticated strategies to deny the existence of gross inequities in society and extensive environmental damage.

Another characteristic of the economics profession that aligns it with accommodationists is a faith in technical solutions to systemic problems. In particular, economists are almost uniform in their belief that proper pricing can "internalize externalities," either by letting the market set those prices or by having government do so. The market fundamentalists, who want to keep government entirely out of conservation efforts and let the unregulated market determine environmental outcomes, are by far the most extreme accommodationists. But even more progressive economists, who want government to enforce the "polluter pays principle," are reluctant to rock the boat once a few end-of-pipe pollution controls are in place. However, environmental damage is more pervasive than isolated acts of pollution or destruction. It is woven into the fabric of economic activity. Some would say this is the result of capitalism, but it is more complicated than that, since socialist regimes have seldom been kind to nature and have often been hyper-destructive. Although pollution taxes can serve a valuable function, a more comprehensive solution is needed, one that applies a set of organic principles and shows how to revamp all economic activity as well as rules of ownership. To strive for less is to be an accommodationist.

Some national conservation and environmental groups support policies that are directly tied to the programs of corporate allies. Others are more concerned about the public interest. Nevertheless, they are still devoted to goals that avoid questioning the system that concentrates political and economic power. That is the ultimate test of accommodationist philosophy. Those who become insiders in the halls of power are not motivated by economic efficiency, legal correctness, or environmental preservation, although they may have begun with those ideals. Ultimately, the accommodationist strives to be on the winning team, the one that is aligned with one or more major political parties, that

promotes projects that will elevate the status of one's allies, and that has positive value in public relations.

In the field of energy politics, the accommodationist does not waste words defending conservation. In water policy, the conservation of local aquifers and surface waters is too prosaic. It violates the American credo of preferring a grandiose solution, even if it ultimately requires using the most resources. "Real men" do not conserve resources; real men have vision and acquisitive genes, they sally forth like their warrior progenitors and grab more. Conservation is for sissies. Thus, the accommodationists for decades made their peace with massive energy projects that were less efficient or resilient than small projects that involved the participation of end-users. Similarly, accommodationists have favored giant dams or desalinization projects to produce fresh water from the sea, when changes closer to home could have achieved the same ends more cheaply, equitably, and democratically.

The same principles still operate today. The accommodationists are always looking for the big win that will add to their prestige, while smaller, democratic groups that propose more down-to-earth solutions have difficulty gaining a hearing. Environmental justice programs and coalitions continue to have a very low public profile and low budgets. The programs within larger organizations that are devoted to participatory and transformative projects are also not well financed. Few businesses or foundations are willing to support programs that challenge both environmental *and* economic conditions, in support of working people.

It is, of course, much easier to accommodate the interests of political and economic elites than to defy them. But accommodation cannot achieve its stated goals. By leaving intact unjust economic conditions and isolated policies to internalize externalities, economists and major environmental organizations fail to grapple with the underlying imbalances that cause environmental problems in the first place. If we are going to make a serious effort to live in harmony with nature, we also need an economic system that enables people to live in harmony with each other. The accommodationists are not going to assist in bringing about that transition.

The Sacralists

The primary opposition to the accommodationists comes from those I call "sacralists," a broad term that includes everyone who hopes for systemic change. Many critics of current economic and environmental policies use the term "sacred" to refer to the natural elements they seek to preserve and to the social arrangements that would permit equitable sharing among humans. Because this category includes so many diverse critics of the present social order, I suggest the need for subcategories, such as "utopian sacralists," who insist that we should rely on simple technology, and "pragmatic sacralists," who recognize the necessity of working with the tools at hand.

The use of sacred terminology is understandable. It orients our attention toward the givenness of nature, something that we do not create. We can turn trees into houses, ores into metallic objects, and fertile fields into banquet dinners. But we must have the raw materials to work with, and those are not of our making. In that sense, we stand on holy ground every day that we live on the earth.

Thus, we find the word "sacred" being used increasingly in environmental policy. For example, in their acceptance of the Right Livelihood Award, Maude Barlow and Tony Clarke (2005) stated: "Water is a sacred component of the commons; it belongs to our common humanity, the earth and all living species." Scientist and activist Vandana Shiva (2002: ix-x) sounds a similar note when she compares the Aquafina bottled water she drinks on a train in India to the street-level *Jal Mandirs* (water temples) in Jaipur, where water is given away to passersby:

This was a clash between two cultures: a culture that sees water as sacred and treats its provision as a duty for the preservation of life and another that sees water as a commodity, and its ownership and trade as fundamental corporate rights. The culture of commodification is at war with diverse cultures of sharing, of receiving and giving water as a free gift.

Later in her book, Shiva (2002: 131, 138) makes even clearer what she means by the term "sacred." As she uses it, there are definite religious connections and a strong bias against any sort of utilitarian calculus:

In India, every river is sacred. Rivers are seen as extensions and partial manifestations of divine gods. According to Rigvedic cosmology, the very possibility of life on earth is associated with the release of heavenly waters by Indra, the god of rain. . . . The water crisis results from an erroneous equation of value with monetary price. However, resources can often have very high value while having no price. Sacred sites like sacred forests and rivers are examples of resources that have very high value but no price. . . . Protection of vital resources cannot be ensured through market logic alone. It demands a recovery of the sacred and a recovery of the commons.

We will return to this quotation and the understanding of the sacred that it holds. For now, let us just say that the sacred can have diverse meanings and that we should not become too quickly attached to any one of them. However, because Vandana Shiva is a highly regarded spokesperson for utopian sacralism, we shall have several occasions to return to her statements in the following pages.

The word "sacred" is often employed in a very broad sense to refer to wise and careful use. In a statement prepared by the National Religious Partnership for the Environment (1990), the leading scientists who were signatories recognized the practical value of invoking the sacred:

As scientists, many of us have had profound experiences of awe and reverence before the universe. *We understand that what is regarded as sacred is more likely to be treated with care and respect.* Our planetary home should be so regarded. Efforts to safeguard and cherish the environment need to be infused with a vision of the sacred. At the same time, a much wider and deeper understanding of science and technology is needed. If we do not understand the problem, it is unlikely we will be able to fix it. Thus, there is a vital role for religion and science. (Emphasis added.)

Without defining the sacred, these scientists recognized that it may be helpful to use such language in gaining public support for environmental goals. As David Suzuki (in GPIW 2014) has said: "If life is sacred, we cannot treat other organisms as if they are cars or computers; we must act with respect, humility and love."

I endorse the sacralist zeal to protect life on the planet, and not merely for the sake of rhetoric. Our species is hardwired with some sense of sacrality, as our ancestors saw fit to start burying their

dead around 100,000 years ago. No affiliation with a religion is required to believe that all of life is sacred and due respect and reverence. Treating nature as a sacred gift means treating it wisely, with our full capacity to imagine ways to heal the split between humans and the earth. That is the credo of the pragmatic sacralist. The choice between wise and profligate uses of nature is tied to social organization and systems of economic distribution. It should be possible to meld the sense of the sacred with pragmatic action: policies that actually work to bring about a greater harmony of interests. We should not abandon any potential tools at the beginning of the process because we cannot be sure which ones will come in handy.

Sacredness: Has it worked historically? Lest it seem that sacrality is mere sentimentality, let us consider a few cases in which defining an object as sacred has actually inspired people to protect it.

One example is a grove of trees that was found in Lebanon, growing inside a walled enclosure, in sharp contrast to the surrounding land that had been denuded by goats and severely eroded. Lowdermilk (1953: 12) describes how this came to be:

The mountains of ancient Phoenicia were once covered by the famous forests of cedars of Lebanon What has become of this famous forest that once covered nearly 2000 square miles? . . . This forest was protected in Roman times to grow timber for the Roman fleet as told by inscribed monuments But today only four small groves of this famous Lebanon cedar forest are left, the most important of which is the Tripoli grove of trees in the cup of a valley As we read the story written in tree rings, it appears that about 300 years ago the grove had nearly disappeared with no less than 43 scattered veterans standing. These trees with wide-spreading branches had grown up in an open stand. About that time a little church was built in their midst that made the grove sacred; a stone wall was built about the grove to keep out the goats that grazed over the mountains. Seeds from the veterans fell to the ground, germinated and grew up into a fine close-growing stand of tall straight trees that show how the cedars of Lebanon will make good construction timber when grown in forest conditions.

In this case, the trees were protected only as an accidental effect of association with a church that was regarded as sacred. Only a tiny

fraction of the original forest was preserved, a token gesture in the midst of an ecological catastrophe. While it may have been possible to treat one special location as sacred, it would not have been possible to treat the entire landscape with the same reverence without transforming the society and economy of the inhabitants. It seems that granting sacred status to something (like setting aside a modern wilderness area) can preserve it, but that procedure cannot protect the surrounding areas that are subject to harsh treatment.

An even more dramatic story took place during World War II in the Russian town of Pavlovsk, near St. Petersburg (then Leningrad). It is a story of self-sacrifice on behalf of a revered biological treasure that was treated as sacred whether that terminology was used or not. During the siege of Leningrad from 1941 to 1944, the scientists of the Pavlovsk Experimental Station (part of the Vavilov Institute), a repository of thousands of varieties of seeds and tubers, moved the mobile parts of the collection to other parts of the city and guarded them with their lives, literally (Blackwell 2003). Twelve of the scientists died of starvation rather than eating any of the edible stocks available to them because 90 percent of genetic material housed there was unique. They felt a duty to preserve those plant varieties for future generations. As Blackwell (2010) describes the ordeal and the reason for it:

They sacrificed their lives (slowly, painfully, across months) to preserve the collection of seeds that they and their colleagues had collected in expeditions to several continents. The seeds and tubers they protected included grains descended from the early Babylonians as well as South American potatoes resistant to the potato blight that (with help from the British government and New World immigration policies) starved a million Irish. After drought wiped out important varieties of Ethiopian food crops and war did the same in parts of the Balkan Peninsula, it was seeds from the Vavilov Institute that permitted replanting.

Although accounts of these events are more circumspect in their use of language, one senses that these seeds were indeed sacred. The willingness of the scientists to lay down their own lives for them is a testament to sacrality in this case. Indeed, if we made some form of

self-sacrifice a prerequisite for calling things sacred, the term would be used with greater care.

The "ending" of the story about the Vavilov Institute reveals just how difficult it is to retain any sense of the sacred in modern times. In 2010, the station was scheduled for demolition to make way for luxury homes, a perfect symbol of the new rent-seeking Russian economy, and the ultimate irony for those who gave their lives to preserve the station and its genetic information. In 2012, the Russian government gave the Institute a reprieve by ordering the land preserved for the station (http://www.vir.nw.ru/news/14.05.2012_en.html).

In Bolivia, in the year 2005, the Andean term "Pachamama" (mother earth) was introduced into water politics as a way of invoking the sacred. According to this view, if water is part of mother earth, it cannot be treated as a commodity.

This belief infused the rebellion in Cochabamba, Bolivia against monopoly ownership of the water supply by a team of foreign corporations. It enabled a successful populist uprising against a plan that had already tripled the price of water and even charged villagers for the right to collect rain water. Yet after the water wars were over and the corporations abandoned the project, the claim that water is sacred provided little practical guidance to municipal water managers. Does it mean that governments have a sacred duty to supply at zero cost as much water as citizens demand through a complex network of pipes of human construction? As local officials in Cochabamba discovered, those systems are expensive to build, especially in an arid, mountainous region. Where would the money come from, if not the local customers? The language of the sacred might be able to overturn a privatization scheme that allows companies to extort unnecessarily high prices, but it does not solve more ordinary problems of water distribution.

The cases discussed, in which the highest form of reverence was bestowed upon certain living objects, might create the impression that the planet can actually be protected by invoking the sacred. That is certainly the intention of many environmental activists who appeal to the sacredness of life. But setting aside certain resources as not-to-be-disturbed does not solve the larger problem of assigning rights to what is used and creating social systems that will encourage proper use of nature's gifts. The sacralization of water in Cochabamba helped reclaim

the water for citizens, but it did not then offer a means of distribution. In addition to the utopian sacralism of those who would die to protect natural systems, we also need a pragmatic sacralism that shows us how to live with nature's gifts.

Must sacred mean rigid or absolutist? When the word "sacred" refers solely to an attitude of awe or reverence for the gifts of nature, there is no conflict between utopian and pragmatic sacralists. Both can adopt that meaning without any reservations. But the word has past associations that seem to undercut harmonious possibilities. For example, in India, there are many malnourished "sacred" cows that wander the highways and byways, suggesting an association of sacredness with emaciation and disease. Another story from India carries the same ambivalent message. Contrary to claims by Vandana Shiva (2002: 134), the sacred Ganges River does not destroy cholera bacteria. In fact, as Slack et al. (2004) note, the Ganges delta was the historic source of cholera, from which it spread to the rest of the world through a series of pandemics in the 19th and 20th centuries.² Even in the 21st century, between 400,000 and 500,000 children in India die each year from diarrhea (Mudur 2003), which is a primary symptom of cholera. These examples pose difficulties for a pragmatic sacralist who does not wish to accept every traditional use of the term "sacred."

The use of the word "sacred" in the political arena in the United States has also been highly problematic. The people who currently invoke the "sacred" most often are those who would prohibit abortion, even under extreme circumstances. They would assign an absolute value to one form of life (the human embryo or fetus) and thereby denigrate all other forms of life that do not share in that absolute value. While they make the life of an unborn child sacred, they do not grant the same status to children and adults who die unnecessarily in wars or because of unjust economic policies. In fact, this misuse of the term "sacred" has been used to sacrifice the lives of mothers.³ What they deem sacred is not "life," but rather "innocence." If they presented their case honestly in those terms, far fewer people would be persuaded.

When environmentalists invoke the sacred, their purpose is clearly different, but the language still sometimes suggests intransigence, a morality of absolutes in a world of relativities. The seeming

intransigence of environmental activists may, however, be more amenable to a flexible response. When 95 percent of a nation's wetlands have been filled, the environmental activist is right to be intransigent. A compromise on the destruction of the remaining area is not a balanced approach. It amounts to capitulation. However, rather than identifying particular parcels of land as sacred, a better approach would be to find a sacred path by which some former wetlands might be restored, raising the total percentage above the current level. Instead of just protecting the last 5 percent of wetlands, the sacralist should aim to create a system that could reverse some past destruction, as difficult as that might be.

Which tools are sacred, which profane? Vandana Shiva's anti-corporate rhetoric is an essential component of her argument that nature is sacred. This language creates a moral dualism, making absolutes of good and evil. It equates evil with corporations and with allocation of water using prices; the sacred is defined in terms of individual use and gift-giving. Those categories leave a huge gray area between good and evil. The fact that households may contribute to the destruction of water systems or habitat is a fact that is excluded from awareness by this method of argument. I also hope to show that the use of prices to allocate water is the best means of limiting the power of corporations to monopolize water systems. Does that make water pricing sacred? Not likely. However, dividing the use of water between sacred and evil categories may not be the best way to think of it. A far better approach would be to find a sacred path that transcends dualism.

Shiva's claim that "*the water crisis results from an erroneous equation of value with monetary price*" is a strong statement that is misleading. First, as we shall see in a later chapter, the large-scale private acquisitions of water rights in Africa are occurring through political channels, not because water has monetary value. Putting a price on water and forcing foreign businesses to pay a fair price for it would immediately stop the wholesale theft of Africa's water and the related destruction of its watersheds. Irrigation water already has a monetary value everywhere in the world. Denying it merely allows politically well-connected companies to obtain it for next to nothing. If any association of water with a price system is a form of contamination, nations will be faced

with an impossibly difficult task to treat water and wildlife with the respect they are due.

Shiva strongly implies that the water crisis would subside if water and wood could be divided up among humans according to logic of the commons, without the use of prices. In the case of a village well or a village-managed forest, the simple rules of a commons can be applied without great difficulty. Prices are unnecessary under those conditions. Shiva does not, however, explain how water should be managed when it is supplied to large cities or to large agricultural water districts. At some point, scale is a problem that requires new tools, with or without the involvement of for-profit corporations. Once the problem of scale is present, the sacred economy of local ritual must find a way to enter in a new way into the profane economy of supplying those millions with clean drinking water on a daily basis. Even in India, engineers, not priests, deal with the mundane problems of managing the nation's water supply.

Continuing in the same vein, one might reasonably ask how the sacralization of water actually helps farmers gain access to this precious fluid. Richey et al. (2015), in their use of satellite imagery to examine groundwater basins, have discovered that the Ganges Basin is one of the most stressed systems in the world. Like the farmers in California, the farmers of the Ganges region are pumping water out of the ground faster than it is being replenished. Is this because the surface water is sacred, but the groundwater used to grow crops is not? Or is it because there are political obstacles to setting limits on groundwater pumping? Either way, a crisis is brewing that will have an effect on India's capacity to grow enough food. Simply categorizing the Ganges as a sacred river does nothing to provide groundwater to the farmers who need it.

Pragmatic sacrality as common ownership. As we have seen, invoking the sacred can inspire self-sacrifice or collective action in extreme cases, or it can protect a discrete habitat from being entirely destroyed. But we have also seen that the word "sacred" can lead to negative consequences by giving absolute value to one thing and denigrating the value of others. There is a place for both utopian sacralism and for pragmatic sacralism. There are occasions when intransigence is called for, but most of the time, a more flexible and nuanced approach will achieve better results.

In the latter case, we want to find a way to hang on to the benefits of sacrality as a way of mobilizing public support for equitable policies, but at the same avoiding the negative effects of treating the sacred in terms of absolute rights that allow no room for flexibility. One method of using the term "sacred" in a way that can balance competing claims to the earth is by adopting some theory of common rights or common ownership. Approaching the allocation of earth's resources in this way prevents large-scale interests (private, corporate, and governmental) from simply seizing land or water, and at the same time, it leaves open methods of allocating and paying for individual uses of a common resource.

Consider the role of water in a village in India that is located along a river. It is perfectly understandable that the villagers deemed the water sacred, in large part because it was part of an economy of sharing. For hundreds of years, the inhabitants were able freely to take water from the river for drinking, washing, and watering their crops. If it was a large enough river, there was no conflict with other users. Since the water came to them at no cost, it certainly seemed a sacred gift of life. But, over time, cities grew up along the river, and those cities built filtration systems, pumping stations, and systems of pipes, all to deliver water to end-users in houses, shops, and farms. How is it possible to maintain the sense that water is sacred in an urban environment? The answer lies in using common ownership as an instrument to sustain the idea of sacrality.

Dangerous Confluence of Accommodationists and Sacralists

Before we delve more deeply into common rights as a clearer way of thinking about the sacrality of nature, we need to observe one additional danger associated with invoking the sacred. The danger is that utopian sacralists will support precisely the same objectives as the accommodationists. This condition has already been realized in many cases.

Given the great gulf that seems to separate the accommodationists and the utopian sacralists, it is perhaps surprising that they might agree on something, and yet they do. They are both opposed to the use of prices to allocate resources. For example, David Goldstein (2015), co-

director of the energy program of the Natural Resources Defense Council (NRDC), claims that a carbon tax could not adequately reduce emissions of carbon dioxide. Since NRDC has long favored methods, such as cap-and-trade schemes, that treat corporations with deference, his critique of environmental taxes is not new. The same was true for many years of the Environmental Defense Fund (at times called Environmental Defense). Bill Chameides (2007), the Chief Scientist at Environmental Defense, asserted that "a carbon tax is a bad idea." His proposed solution: "A cap-and-trade strategy provides the incentive for all segments of the economy to compete to discover the best ways to cut emissions." Although that method uses "the market" to guide decisions, it starts by giving a large bonus to businesses that have previously emitted large amounts of carbon dioxide.

Both sides believe that the allocation of access to nature should be made on the basis of politics. The accommodationist defers to powerful interests, and the sacralist defers to the people—the *demos* of democracy. However, since powerful interests outweigh popular consent on most issues, the net result of almost every political decision is the same: monopoly power maintains control of nature. Property owners may propose schemes that would allow rights in nature to be traded or used as offsets against damage created elsewhere, arguing that these "market mechanisms" will produce environmentally beneficial and equitable results. It is not surprising, therefore, that the sacralists see no choice but to toss the whole system out. In fact, the "market" that most utopian sacralists have learned to despise is this *personal* market—a bargaining process between large companies and central governments. To them, the very notion of "market" automatically means a corrupt process in which powerful interests negotiate for greater power and often get it.

The accommodationists also think of these personal markets, in which companies jockey for influence with governments, as true markets. That is precisely what they want. Accommodationists have no desire to promote the idea of *impersonal* markets, in which prices reflect scarcity and taxes reflect social norms. In an impersonal market, in which every individual or company is faced with the same risks and rewards, the large company may actually be at a disadvantage, weighed down by internal diseconomies of scale. That is why corporate giants

have no desire to compete on the basis of price, particularly when the price is set by a government-imposed tax.

When utopian sacralists deny the potential of prices to challenge the system of concentrated ownership, they are left with only one tool to fight the businesses they despise: public protest through direct action. Through such protests, sacralists have fought to block some giant hydropower dams or projects that would destroy a large segment of rainforest. A few may even go so far as to propose to dismantle the World Bank or the World Trade Organization. But these are defensive battles against a few visible assaults on nature. Even if they win in those cases, after years of fighting, they leave unregulated thousands of smaller projects going on simultaneously. That strategy may make for effective fund-raising appeals by NGOs, but it does very little to protect the natural values they profess to hold sacred.

Even when sacralists win a battle, they have no constructive program. Invoking the sacred can mobilize people politically to rectify gross wrongs, but it cannot set the ground rules for day-to-day management of hundreds of thousands of ongoing projects. By denigrating the economic tool of pricing, which could operate everywhere as a check on excess power, the sacralists leave the door open to routine harm to nature and communities. In this way, the sacralists are inadvertently taking the same side as the accommodationists on 99.9 percent of the projects that violate their norms. Since the sacralists cannot be everywhere, they leave the field open to the accommodationists. This is a serious flaw that allows the monopolizers to operate without resistance in most domains. That is why sacralists need to embrace prices (in the form of taxes) as an instrument to reclaim the rights of nature and ordinary people.

Pricing as a Tool to Disintegrate Monopoly Power

Since the use of prices is normally embedded in markets that are skewed by concentrated ownership, it is understandable that sacralists have turned to politics and eschewed economics. To the casual observer, the economy seems to be a casino in which the "house" always wins, where the "house" consists of the people, banks, and other businesses that own or control most of the resources. For that reason,

environmentalists have concluded that participatory politics is the best available option, since markets are controlled by elites.

It is understandable that so many utopian sacralists fear markets. They accurately assess that many markets are rigged to favor the people who have economic and political power. But that is not the whole story. The question they fail to ask is whether the market *can* be used as a weapon of the weak, for democratic purposes, as a method of restricting the power of monopolists. I would argue that prices, in the form of taxes, can be used as instruments to rectify the imbalances that currently exist in the economic system.

I start with the same premise held by utopian sacralists, such as Maude Barlow or Vandana Shiva: nature should be shared equally and not hoarded by companies that seek merely to profit from scarcity. I also agree with them that gifts of nature should not be treated as private property to be hoarded for private gain.

Where I differ from utopian sacralists is with their assumption that the only fair way to allocate natural resources is through rationing or political criteria. Since they seldom spell out their proposed method of allocation, I am forced to conjecture what they have in mind. The only feature they make clear is their rejection of commodification and exchange of nature based on prices. But the rejection of one view does not amount to the construction of an alternative. If prices do not allocate a resource, the only alternatives would seem to be a) a lawless fight for it, b) prescriptive rights (squatters' rights), or c) a system of rationing according to criteria that become more complicated over time.

No thoughtful person favors the first option: a war of all against all. Yet that is the form that claims to diamonds and other resources in Africa take in practice, as foreign interests fight proxy wars that persist for long periods, mostly over control of resources. (Botswana is an interesting exception. In that country, the diamond wealth has been shared by the people to some extent, avoiding the conflicts that have torn other countries apart.) For the most part, however, proxy wars for European or American interests mean that military power, not economic efficiency, is the basis of allocation. As the term "blood diamonds" suggests, the price of diamonds is paid in blood, not money.

Prescriptive rights can work in some contexts, such as allocation of land in villages, but in most parts of the world, village land ownership is highly concentrated, which is not what the critics of pricing favor. During the Gold Rush in California, miners were allocated stream space to pan for gold as long as they worked the claim. The group enforced the claim, so there was an informal legal system. But this system worked as well as it did only because the average miner lost money by mining. If the gains to be made were higher, the level of lawlessness might have been greater. At any rate, prescriptive rights worked for short-term claims within geographically confined areas. They do not work as well in large forests, underground or open-pit mines, ocean fisheries, exploration of new territories, or urban real estate.

Since anarchy and prescription have severe limits, the usual method of non-price allocation is through administrative rules. Such rules might begin with simplicity, such as basing the size of an allocation on the size of a family, but over time, the rules become more complex and cumbersome. For example, if every member of a family in a village receives an equal share, what happens when someone moves to the city for an indefinite period? How do shares change during a drought? If allocating water, what if some is contaminated?

As I noted above, allocation by administrative fiat or political principle is precisely what the accommodationists favor, and the net result is the ability of oligopolists to manipulate the political system to gain favorable treatment. In other words, the problem with the utopian sacralists is that they are naïve about the ways in which political allocation works. Instead of favoring the poor, most such systems favor the groups with the strongest ties to the political party in power. Municipal ownership is often the best available option for water management, but even that does not guarantee equity, since powerful interests can entice the city to create public-private partnerships that subvert whatever system of democratic allocation is devised.

Setting prices on the gifts of nature, in contrast to political management of them, can exert constant pressure against oligopoly by requiring every interest group to compete on the same basis, without any special favors for insiders. But that is only true for prices that incorporate the public equity in nature.

Specifically, what I am suggesting is that imposing public charges or fees for the services of nature is one of the most effective instruments to prevent concentrated ownership of water and other resources. In particular, taxes on the ownership of natural resources or charges for withdrawals for private use can equalize economic conditions and reduce the power of owners who acquired their rights through political connections or inheritance. Historically, monopoly ownership thrives in a system in which nature is held without reciprocal payment of fees. Small-scale, democratic ownership occurs most often when everyone must pay for the parts of nature they use. Prices are the best antidote to monopoly.

Rather than eschewing the price system as some utopian sacralists would have us do, we should embrace it as the centerpiece in a war on unearned privilege. It is true that the price system has been rigged politically to favor elites in the past, who first obtained their grants of land or water or pollution rights and then insisted on monetizing them. But instead of throwing out the most effective tool for holding those elites accountable and wresting their privileges from them, we must learn how to make the price system work on behalf of the public and for nature. It can be done.

Conclusion

Existing economic arrangements favor a small segment of society, while ignoring both nature and the remainder of society. Despite the existence of political democracy, so-called free markets remain rigged to reinforce the concentration of property rights. Since those who hold the majority of rights have a productivist mentality, the inequalities in the economy have a deleterious effect on nature as well.

A comprehensive plan to protect nature from the depredations of the current owners requires a strategy that will be disruptive. Elites in business, government, think tanks, law firms, universities, and other institutions are reluctant to change any of the rules that govern the current "operating system" for planet Earth. I have assigned the name "accommodationist" to the professionals who keep the system running as smoothly as possible on behalf of the owners, who operate behind the scenes. We cannot expect them to make the changes necessary to create a sustainable system because their loyalties are to interests that

benefit from current privileges. The fact that many of the accommodationists call themselves environmentalists does not alter the fact that their work runs counter to the systemic transformations needed to protect the planet.

The only genuine opposition to the status quo comes from people and groups I have called "sacralists." They tend to believe in a natural harmony that sustains health in both nature and society. Excessive power in the hands of an elite tends to destroy that harmony. Ecological restoration is therefore tied to social restoration in ways that accommodationists fail to appreciate. Utopian sacralists are purists who implicitly hope to recapture a past condition with a smaller population and more limited technology. Pragmatic sacralists recognize the necessity of working within present conditions and using the tools that are necessary to sustain the world's current population. Since population growth makes natural services scarcer, pragmatic sacralists believe that prices are needed to allocate the gifts of nature among people. But just allowing the price system to function does not automatically increase social harmony. Quite the opposite under present circumstances.

The crucial element that is generally missing in the "free market" is the compensation of the public for the use of natural services. This entails: 1) the idea that nature belongs to society as a whole, 2) the insistence that privatization of nature should not come at the expense of the common good, and 3) the recognition that charging private users for natural services actually makes the market system healthier, not only in protecting nature from excessive use, but also in terms of preventing the development of monopolies that destroy social harmony.

In the following chapters, we will examine how these principles apply to the allocation of water, with an emphasis on California. The choice of California to study water policies is not arbitrary. The doctrine of prior appropriation, the legal basis of the dominant form of water license in the world today, developed initially in California. The inefficiency and waste that result from this legal method of allocating water are evident in California, and the resulting pressure on government to build large-scale waterworks to offset that inefficiency are also part of the state's history. Finally, California has suffered from the same problem now being encountered around the world, whereby large grants of

water are associated with large-scale ownership of farms, a condition that is socially destructive. Thus, California is a microcosm of the range of problems associated with mismanagement of water, which, in turn, sheds light on the more general problem of how to align human needs with the demands of nature.