

From Mary C. Wood, *Nature's Trust: Environmental Law for a New Ecological Age* (2013)

Introduction

"You Can't Negotiate with a Beetle"

You can't negotiate with a beetle. You are now dealing with natural law. And if you don't understand natural law, you will soon.

Oren Lyons

Oren Lyons's statement refers to 4 million acres of Canadian forest wiped out by beetles now thriving in warmer winter temperatures as a result of planetary heating. Lyons has a knack for putting environmental problems into terms that are hard to argue with. A member of the Onondaga Nation Council of Chiefs and professor of American studies, he emphasizes "natural law," a principle that has guided the indigenous approach to ecological management for thousands of years. As Lyons once put it in an interview:

The thing that you have to understand about nature and natural law is, there's no mercy.... There's only law. And if you don't understand that law and you don't abide by that law, you will suffer the consequence. Whether you agree with it, understand it, comprehend it, it doesn't make any difference. You're going to suffer the consequence, and that's right where we're headed right now.¹

THE NEW ECOLOGICAL AGE

The planet we inhabit seems suddenly and violently out of balance. The consequences of humanity's disregard for Nature's laws find glaring reflection through the prism of ocean life. Four hundred "dead zones" now murk the world's seas, collectively spanning tens of thousands of square miles. Off the coast of Oregon, a dead zone the size of Rhode Island resembles an underwater graveyard, with thousands of crab skeletons drifting in lifeless waters. In Moreton Bay, Australia, toxic fireweed can spread across the sea floor at a rate covering a football field every hour. When fishermen touch it, their skin breaks out into blistering welts, and their eyes burn and swell shut. Thousands of miles away on the Florida Gulf coast, a dreaded

red tide visits once a year and persists for months. Ocean breezes carry toxic wafts inland to waterfront communities, sending victims to the hospital with pneumonia, asthma, and bronchitis.²

Halfway between North America and Japan, the corpses of 200,000 dead albatross chicks speckle a rookery at Midway Atoll, their little gullets filled with plastic Legos, bottle caps, and Styrofoam balls that their parents plucked from the water and fed them. A garbage continent composed of plastic bottles, wrappers, and bags stretches twice the size of Texas in the Pacific Ocean.³

In New England, families that fished for generations have retired their boats because the oyster fishery has plummeted. Once providing a catch of millions of pounds of oysters a year, more than eight out of ten oyster reefs have vanished. Worldwide, nearly one-third of the sea fisheries have collapsed, and big fish populations have dropped 90 percent. Marine biologists project the complete loss of wild seafood just four decades from now: that would be the end of an entire food group that humans have relied on since time immemorial. Yet far out to sea, ocean fishing trawlers still scrape the bottom of the ocean in half-acre swaths. They haul in catches indiscriminately as if the marine life remained inexhaustible.⁴

All over the world, nitrogen and phosphorous compounds wash into the bays from septic tanks, farms, and sewers. Bulldozers chew up fragile wetlands along the coasts to create destination resorts and subdivisions. Every day, ocean water absorbs carbon dioxide emitted from industrial chimneys, coal-fired plants, and cars. Some ocean water has become so acidic from this pollution that the shells of sea creatures dissolve in it. Twenty percent of the coral reefs have disappeared, and the number could climb to 60 percent by 2030. Scientists warn of "potentially catastrophic consequences" for ocean life.⁵

Humans have toppled the oceans' chemical balance. Ancient forms of bacteria now thrive and proliferate, as if the seas have reverted to a primeval state. *Los Angeles Times* reporter Kenneth Weiss describes a "virulent pox" afflicting the world's oceans. In the words of one scientist, the seas now succumb to "the rise of slime," regressing to "a half-billion years ago when the oceans were ruled by jellyfish and bacteria."⁶ As Oren Lyons would point out, you cannot negotiate with slime.

No one ever guaranteed that a lifestyle of colossal waste and resource consumption could continue indefinitely without consequences to our own species. But mass consumerism lulls people into assuming that good collateral exists behind a soaring ecological debt on the planet. Society seems mesmerized by an image of resilient Nature that cannot unravel before our very eyes. Even if it did unravel, leaders assure us, technology will develop in the nick of time to save civilization.

As part of the problem, industrialization has estranged people from their own survival. Many citizens live so detached from food production, water collection, and shelter provision that they remain oblivious to the basic connection between

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ecological health and human need. Neon indicators of environmental collapse attract little notice in mainstream society. Elizabeth Kolbert writes in *Field Notes from a Catastrophe*, "It may seem impossible to imagine that a technologically advanced society could choose, in essence, to destroy itself, but that is what we are now in the process of doing."⁷

Cascading calamities have prompted a body of "collapse scholarship." These writers no longer concern themselves with isolated problems such as a polluted river or a threatened species. Instead, they focus on a big picture that shows society now exhausting life-sustaining natural resources at a pace that threatens the future of civilization. James Speth inventories accumulating evidence in his book, *The Bridge at the Edge of the World*. Submitting that society faces a future of "catastrophes, breakdowns, and collapses," he asserts, "[W]e're headed toward a ruined planet." Jared Diamond carries a similar message in his book, *Collapse*. Observing no fewer than a dozen environmental time bombs with short fuses – crises relating to water, soil, toxics, overpopulation, deforestation, habitat destruction, overhunting, overfishing, introduction of nonnative species, climate change, energy shortages, and Earth's photosynthetic capacity – he notes, "If we solved 11 of the problems, but not the 12th, we would still be in trouble, whichever was the problem that remained unsolved. *We have to solve them all.*" This generation of humanity has clearly traveled into a new ecological era. As Bill McKibben submits in his book, *Eaarth*, it is as if humans now inhabit a different planet – one far less hospitable to our own survival.⁸

Presses are running at full speed to disseminate new ideas and transformative models to restructure society in a way that will allow humans to survive in the years ahead. It looms as a massive task. As Paul Hawken says in the film *The 11th Hour*, "There isn't one single thing that we make that doesn't require a complete re-make."⁹ One would think that environmental law would lead visionary reform. Instead, environmental lawyers and regulators still do things very much the same way they did forty years ago. This book aims to bring environmental law face to face with the new ecological age unquestionably bearing down on us. It presents a transformative framework – Nature's Trust – to fundamentally redirect government's environmental policy from its present course of legalizing colossal damage to a project of epic restoration.

THE LEGAL MEMBRANE

Throughout most of human history, societies have governed their relationship to the environment through a series of customs, codes, and rules. Even during Justinian times, for example, the Roman Empire issued legal edicts on the taking of fish, the ownership of eroded soil, and the cultivation of bees.¹⁰ No matter how simple or complex the rules may be, environmental law creates a legal membrane through

which individuals act in relation to Nature. The efficacy of this law should be of utmost concern to citizens: any government that fails to protect its natural resources consigns its citizens to misery – and often death.

In *Collapse*, Jared Diamond studies why notably flourishing societies throughout history collapsed precipitously. These societies, he notes, often exhibited a characteristic mismatch between the society's consumption and the resources available. Less obvious is why the governing structure of the society sometimes allowed consumption to reach disastrous proportions grossly exceeding Nature's limits. Diamond attributes this in part to a conflict of interest between the short-term interests of the decision-making elite and the long-term interests of the society as a whole. As he describes, when members of the ruling elite pursue goals that become "good for themselves but bad for the rest of the group," they lead society on an unsustainable track, heading it toward collapse.¹¹ Today, the decision-making elite includes thousands of environmental agencies in nations across the world. Collectively, they rule over Earth's natural resources. Like the collapsed societies Diamond inventories, these officials now make decisions that are good for themselves but bad for society and future generations. Behind a veil of environmental law, their decisions push the entire world toward collapse.

Unique in the law, environmental regulation remains accountable to a supreme set of mandates – the laws of Nature, or Natural Law, as Oren Lyons and many indigenous leaders call it. Environmental law's primary function seeks to bring society into compliance with these natural laws, which, in the end, determine whether citizens prosper or perish. As Professor Richard Lazarus writes, "[E]cological catastrophe and human tragedy can occur when human laws fictionalize or otherwise ignore the laws of nature."¹² If environmental law, no matter how seemingly complex or sophisticated, becomes too detached from Nature's own laws, it will become irrelevant. If the hundreds of thousands of bureaucrats and legislators dispersed across the world today make decisions aimed to promote their own short-term interests as in the ruined societies Diamond describes, our collective future rests in dangerous hands.

The United States boasts the most elaborate environmental laws in the world. They exist as a convoluted morass of statutes, regulations, court decisions, and other legal instruments. Basic environmental law principles arose early in the country's history, but they morphed into statutory form only in the 1970s. This era gave rise to the Clean Water Act, the Clean Air Act, the Endangered Species Act, the National Environmental Policy Act, the Toxic Substances Control Act, the National Forest Management Act, and a multitude of others. Each statute spawned a cottage industry of lawyers and environmental consultants.¹³

Although directed at different problems, nearly all environmental statutes share one thing in common: they rely on agencies to carry out their mandates. Nature, in

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its entirety, has been partitioned among various bureaucracies – many thousands in all – spanning the federal, state, and local levels. Vast authority vests in these agencies to control or manage discrete parts of the environment. In the U.S., for example, state environmental agencies generally handle air and water pollution. Federal forests are the responsibility of the U.S. Forest Service. Endangered species fall to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. State water agencies issue water rights. Land use matters go to local agencies. The U.S. Environmental Protection Agency (EPA) regulates toxics and pesticides. Wetlands regulation is within the jurisdiction of the U.S. Army Corps of Engineers. And so on. These jurisdictional webs have vastly different reaches and regulatory strands, but they all reflect one thing: agencies are exerting tremendous dominion over Nature.

With few exceptions, statutes authorize agencies to issue permits to damage Nature. Such permit provisions form a common denominator to environmental and natural resource statutes, and a vast portion of the agencies' work today flows from them. Agencies regularly decide whether to permit harm to air, water, soils, forests, grasslands, wetlands, riparian areas, species, and other natural resources. The agencies enjoy tremendous discretion in making these decisions; in fact, agency discretion forms the crux of all modern environmental law. Such discretion rests on a presumption that agencies remain expert bodies that unflinchingly exercise their judgment objectively, for the good of the public, and in accordance with protective statutory goals. That presumption now collides with reality.

Agency discretion drives the demise of Nature. For decades, environmental professionals working within this legal system have assumed it to be functional, and many other nations have modeled their environmental approach after the U.S. legal system. But the ancient membrane of law that supposedly functions as a system of community restraint now stretches tattered and pocked with holes. Our destruction of Nature threatens to create what scientists call a fundamentally "different planet."¹⁴

Two unavoidable questions loom large over environmental law. First, does this field of law work to keep society in compliance with Nature's own laws? Second, can it be effective in confronting the ecological challenges now coming at us with horrifying speed? These questions are of crucial importance not only for the United States but also for other nations confronting ravenous pressure to industrialize (as well as all other nations that must endure the planetary damage wrought by overconsuming nations). If the answer to either question is no, legal scholars must set their sights on a transformative legal paradigm.

Many litigators, scholars, and decision makers will claim that the environmental statutes work. They point to isolated successes in every statutory context. Rivers do not catch fire any more. Gasoline does not contain lead. The pesticide DDT no longer poisons eagles. Industries cleaned up their toxic mess at Love Canal. Influenced

by these perceptions of success, when new problems come along, lawyers tend to turn to the old way of doing things. For example, lawyers responded initially to global warming by filing a petition to regulate carbon dioxide under the Clean Air Act.¹⁵ Yet, well more than a decade after filing the petition, the federal government has still not acted to comprehensively control greenhouse gas pollution – even though scientists clearly warn of perilous planetary heating. Success, as we all know, remains relative. Over just the last few decades, industry has jumped from a white belt to a black belt in Earth-destroying capability, but the law has not changed. Despite entrenched presumptions that environmental law remains effective, the proof lies in the health of the ecosystems themselves. Society now violates Nature's laws not only at the level of species and individual ecosystems but also at the level of atmospheric function, ocean health, and biodiversity – a truly global level.

ECOLOGICAL BANKRUPTCY

Today's ecological losses reside in a different realm than the problems prompting passage of the environmental statutes forty years ago. When the Endangered Species Act was enacted, for example, overhunting and poaching were predominant threats to wildlife, and extinctions remained quite rare. Today, pollution, habitat loss, and climate change decimate wildlife. Imperiled species now show up ubiquitously, in nearly every kind of habitat system. Where one species struggles to survive, others usually do too, for when an ecosystem starts to unravel, its full weave of species frays.¹⁶

Historic problems of overharvest now stand utterly eclipsed by threats to the web of life itself. Today's major wildlife reports do not dwell so much on individual species. Instead, they talk about entire classes of life on Earth threatened. The International Union for Conservation of Nature (IUCN), which compiles data on the world's threatened species, estimates that more than a third (38 percent) of all species face possible extinction. Interpreting this statistic cannot be a matter of seeing a glass a third empty or two-thirds full. Because ecology embodies connectedness, 38 percent becomes the pull-engine on a death train. Leading conservation biologists now conclude that humanity has triggered the sixth mass extinction in Earth's history. As James Speth grimly reports, "The planet has not seen such a spasm of extinction in sixty-five million years, since the dinosaurs disappeared."¹⁷

Some characterize the sheer scale of this destruction by pointing out that humanity would need *two planets by 2030* to support its demand for goods and services. Society now exhausts resources at a breakneck pace. In the tropics, chainsaws have axed the rainforest at a rate of an acre every second, by some estimates. Half of the world's original forest has been obliterated (another 30 percent is degraded or fragmented). Half of the world's wetlands lay destroyed, and a third of the mangroves have disappeared.¹⁸

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Despite its elaborate environmental laws, the United States has wiped out more than half (53 percent) of its wetlands and nearly all (90 percent) of its old-growth forests. At least 9,000 species face risk of extinction in the United States, according to the Council on Environmental Quality. Pollution fouls America, too; industry annually releases more than 4 billion pounds of toxic chemicals into waters, air, and soils. According to EPA, 95 percent of all Americans have an increased risk of lung cancer just from breathing toxins in outdoor air, and one in four Americans lives next to a toxic waste dump. Nearly half (44 percent) of all rivers and streams are unfit for fishing, recreation, and other public uses. Fish advisories for toxic contamination exist for about one out of every four rivers (24 percent). Mercury – a poison to humans – now shows up ubiquitously in fish.¹⁹ Even babies are born polluted, harboring a cocktail of toxins in their bloodstreams.

This colossal damage to Earth had its genesis in the Industrial Revolution, but the real acceleration occurred during the modern era of environmental law. In the last thirty years, Earth's natural ecosystems have declined by 33 percent, and one-third of the planet's natural resources has been consumed. Has environmental law worked? If the health of the planet stands as any indicator, the answer must be clearly no. The law can claim small successes, but overall, destruction from industrial activity has far outpaced the ability of environmental law to protect resources. As political scientist Richard Andrews observes, environmental law has "only selectively, modestly, and temporarily held back" the larger forces responsible for resource collapse. Rather than safeguarding ecology, today's environmental law serves as the cane on which humanity leans as it walks the plank toward its own destruction.²⁰

THE ILLUSION OF ENVIRONMENTAL LAW

U.S. agencies have turned environmental law inside out. Whereas Congress passed environmental statutes with the overriding goal of *protecting* the environment, the environmental agencies now use the statutes to legalize *destruction* of the environment. Under the Clean Air Act alone, nearly 15,000 permits (pending or in effect) allow the poisoning of American air sheds with harmful pollution, including highly toxic compounds. In just the seven years between 2001 and 2007, industries released 31.7 billion pounds of toxins into the environment in U.S. territory.²¹ Other permits and regulatory loopholes allow harm to imperiled species, destruction of wetlands, leveling of forests, and gouging of landscapes. Granted, most permits carry mitigating conditions that lessen the damage that would otherwise occur, but the cumulative effect tallies inexorable, mounting losses. While undoubtedly some agencies remain loyal guardians of the public's natural assets, the bureaucratic mindset of most agencies today aligns all too closely with the industries they regulate.

Diamond's examination of collapsed societies shows that we should be wary of decision makers who make decisions to further their own short-term interests. The pursuit of self-interest by some agency heads surely rivals that of the ancient lords in *Collapse*. As Part I of this book shows, political appointees in agencies regularly hijack their administrative discretion to benefit their allied industries. Because political motives lie concealed behind a thick morass of complexity created by the agencies themselves, it remains exceedingly difficult to untangle corruption or misuse of office.²²

To make matters worse, the judiciary has largely relinquished its role as an institutional check on environmental agencies, regularly invoking the administrative deference doctrine to give weight to agency decisions. The deference principle assumes that expert agencies act as unbiased decision makers, ever faithful to statutory goals. This approach insulates agency decisions from rigorous judicial examination of inappropriate political motivations that regularly influence the agencies. Through the deference doctrine, courts unwittingly create a judicial prop for an administrative facade that conceals political influence and, at times, outright corruption.²³

For the most part, environmental law scholarship ignores these systemic problems. Most scholars confine their criticism to one statute's failure or one program's failure. The problem reaches much deeper and far beyond these isolated instances. Dysfunction permeates the entire structure of the administrative environmental state, both in the United States and in the many other nations that have replicated the U.S. environmental law system. Much like a manufacturer might put faulty and dangerous wiring in 100,000 separate products, the U.S. legal system has put out hundreds of thousands of regulations that no longer function as intended. Worse, they now operate in electrocution mode.

CLIMATE EMERGENCY AND THE BIG ADAPTATION

Even setting aside past failures, we should ask whether current environmental law can effectively confront the monumental challenges ahead. Planetary heating looms as a harbinger of death on a nearly unimaginable scale. In June 2007, a team of leading climate scientists warned that carbon dioxide and other greenhouse gas emissions have placed the Earth in "imminent peril" – literally on the verge of an irreversible tipping point that would impose catastrophic conditions on generations of humanity to come. Climate change from continued greenhouse gas pollution threatens to melt ice sheets over Greenland and at both poles, wipe out the coral reefs, turn the Amazon forest into savannah, and obliterate 40 percent to 70 percent of the world's species. Floods, hurricanes, killer heat waves, fires, disease, crop losses, food shortages, and droughts would arrive with unimaginable magnitude and regularity. Rising sea levels that inundate coastal areas worldwide would trigger

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desperate mass human migrations. In the words of the National Aeronautics and Space Administration (NASA) scientist James Hansen, society's continued carbon pollution will "transform the planet."²⁴

Climate crisis presents nearly unfathomable urgency because of what scientists call "tipping points" – climate tripwires, so to speak. These thresholds, caused by human carbon pollution, trigger dangerous feedbacks capable of unraveling the planet's climate system. Once triggered, these viscous cycles continue despite any subsequent carbon reductions achieved by humanity. Such tipping points loom near. Some may be underway. Some may be intensifying. Vast areas of melting permafrost, for example, now release huge amounts of carbon dioxide and methane into the atmosphere. Melting polar ice caps intensify heating, because less ice remains to reflect heat away from Earth (what is known as the albedo effect). And the natural "sinks," such as oceans and forests, that historically absorbed society's carbon pollution have reached their limits. The oceans have turned acidic, and large swaths of forests (stressed from heat) are dying and then burning, releasing their stored carbon. In 2007, these and other alarming feedbacks caused scientists to warn that greenhouse gas (GHG) emissions put Earth "perilously close to dramatic climate change that *could run out of our control*, with great dangers for humans and other creatures."²⁵

To put it starkly, we face a planetary emergency in which only a narrow window of time remains to act before tipping points foreclose all feasible options. Leading climate scientists believe the safety zone of carbon dioxide in the atmosphere lies below the level of 350 parts per million. Present levels have reached 400 parts per million, an amount not seen on Earth for at least 3 million years. The United Nations projects that humanity's aimless business as usual could heat the planet as much as 11 degrees Fahrenheit by the end of the century. To put that in perspective, all of the floods, fires, heat waves, melting, and weather disasters experienced thus far correlate with a mere 1.4-degree Fahrenheit rise (over preindustrial levels). Worse, even if all emissions ended tomorrow, the persisting carbon already in the atmosphere from 150 years of industrialization will still drive the planet's temperature to 3.6 degrees Fahrenheit over preindustrial levels by 2199.²⁶

Against this horrific reality, climate crisis presents two monumental challenges, tagged in climate circles by the (rather uninspiring) terms *mitigation* and *adaptation*. *Mitigation* calls for slashing carbon emissions enough to prevent runaway heating. Dr. James Hansen and other leading scientists project that society must cut global carbon emissions on the order of 6 percent a year, beginning in 2013, to return the planet to a safety zone. This becomes a colossal undertaking, because fossil fuel powers nearly every aspect of modern industrial society. *Adaptation* means that society must figure out how to survive conditions it has never known. Thomas Friedman captures the twin tasks when he says: "Avoid the unmanageable and manage the unavoidable."²⁷

The climate imperative necessitates protecting the remaining natural resources for two basic reasons. First, any effort to mitigate and thwart the tipping point must entail a drawdown of carbon pollution from the atmosphere. Extracting existing atmospheric CO₂ requires massive reforestation and soil sequestration to absorb carbon. Second, ecosystem protection (and restoration) will prove crucial for adapting to the climate heating that is already, unstopably, underway. Many ecological systems will fail, and as they do, natural resources will become even more scarce. Worldwide, nations simply will not have all of the water, the species, the productive soils, and the forests inherited from past generations (around which they built their societies). Major rivers of the world already show significant loss of water due to climate change. Environmental law of the past geared its loose permissions toward conditions of the Industrial Age. But in a world under ecological siege, all remaining natural assets carry a premium for human survival and welfare. These stark understandings must connect law with the reality of our time.²⁸

As Speth concludes: “[W]e now approach the fork ahead.... Beyond the fork, down either path, is the end of the world as we have known it. One path beyond the fork continues us on our current trajectory ... the abyss.... But there is the other path, and it leads to a bridge across the abyss.”²⁹ Rather than launching a massive effort to build society’s survival bridge across the abyss, government agencies persist in legalizing damage as if Nature had supernatural capacity to regenerate – indeed, as if the end were not already in sight. Agency reform stands urgent as never before. Yet many perceive deep change as remaining beyond political and practical possibility.

REALISM AND THE INEVITABILITY OF TRANSFORMATIONAL CHANGE

Alex Steffen, author of *World Changing*, says: “We find ourselves facing two futures, one unthinkable and the other currently unimaginable.” The severity and pervasiveness of administrative dysfunction means there can be no simple fix. All solutions will entail fresh dilemmas, complexities, and tradeoffs. But these cannot distract from imagining and implementing a different paradigm. Speth rightly argues that we need a “fresh conceptualization ... a new way of thinking.” Many proposals still tinker around the edges of the same business-as-usual behavior that now drives the planet to catastrophe. As Steffen notes, “Faced with the need to reinvent the material basis of our civilization, we argue paper or plastic.” He explains, “The magnitude of the crises we face, [and] the speed with which they are unfolding ... mean that the solutions we need to embrace are not going to be the same *sort of solutions* we’re used to thinking of now.”³⁰

Steffen and others offer new operating principles of our society – concepts such as zero emissions, zero waste, living buildings, and green infrastructure. But an

antiquated system of environmental regulation undermines these civilization-saving ideas. We cannot, on one hand, dare to imagine businesses eliminating pollution and waste, yet on the other hand give them permits to freely pollute. For the most part, environmental law lacks ideas truly calibrated to the magnitude of the problem and the pace of change. It offers only modest proposals for reform – a new regulation here, a new statute there. At this late date, tweaking the law becomes a fool's errand, having no more hope than throwing out a rescue rope that is too short. Instead, legal reform must reach beneath the individual statutes and regulations to address the level of dysfunction that propels this system of legalized damage.

A major source of administrative dysfunction arises from the vast discretion agencies enjoy – and the way they abuse it to serve private, corporate, and bureaucratic interests. As long as the decision-making frame presumes political discretion to allow damage, it matters little what new laws emerge, for they will develop the same bureaucratic sinkholes that consumed the 1970s laws. Only a transformative approach can address sources of legal decay. Moreover, a fundamental frame change in the field as a whole stands as the only practical response to an environmental bureaucracy that is now enormous. The legal machine churns out colossal damage on a *daily* basis by issuing (and reissuing) pollution permits at all jurisdictional levels. (In the course of just two months in 2009, for example, state agencies across 36 states reported 2,632 air and water pollution permits due for issuance or renewal.³¹) Additional, untold damage finds license through regulatory mechanisms such as wildlife “take” permits, wetlands permits, coastal zone permits, land use permits, mining, forestry, and grazing permits, water appropriation permits, and more. Efforts to push back this deluge cannot proceed on a permit-by-permit basis or even a program-by-program basis. Legal battles consume money, time, citizen input, and enormous human energy – inputs that dissipate quickly in the modern world. While an incremental approach might make sense if society had another three decades to accomplish it, climate crisis has annulled the luxury of time.

Unfortunately, however, even the most public-oriented staffers working within agencies tend to resist transformative change. They operate within highly restricted jurisdictional realms and work in isolated regulatory silos. The sheer complexity of environmental law draws them into consuming detail, burrowing them ever deeper into a malfunctioning system even as the need for change becomes all the more obvious to outside observers. Failing to see the big picture of ecological collapse, agency officials tend to approach problems all too narrowly.

Even those agency staffers who do recognize the ecological crisis often find themselves trapped by an entrenched institutional outlook – one that assumes that the political reality will never support deep change. But as Speth and others submit, the industrial paradigms producing that political reality are fast expiring. The status quo, if continued, will provoke ecological collapse, which in turn will dismantle the

society's legal systems and their supporting paradigms. Diamond surmises that a resolution to society's problems will appear, one way or another, within decades: "The only question is whether [the problems] will become resolved in pleasant ways of our own choice, or in unpleasant ways not of our choice, such as warfare, genocide, starvation, disease epidemics, and collapses of societies."³²

In sum, the Earth defense effort requires an epochal project of rebuilding natural wealth. Instead of incremental reform, the circumstances call out for a full paradigm shift that infuses all government decision making with restoration duty. Citizens worldwide must tap a wellspring of legal *obligation* to compel their governments to tackle this challenge.

NATURE'S TRUST

This book develops a framework, Nature's Trust, to characterize government's ecological obligation in the modern ecological age. Nature's Trust draws forth an ancient and enduring legal principle known as the public trust doctrine. With roots extending back to early Roman law, the doctrine rests on a civic and judicial understanding that some natural resources remain so vital to public welfare and human survival that they should not fall exclusively to private property ownership and control. Under the public trust doctrine, natural resources such as waters, wildlife, and presumably air, remain common property belonging to the people as a whole. Such assets take the form of a perpetual trust for future generations. The public's lasting ownership interest in this trust vests in both present and future generations as legal beneficiaries.³³

Public trust law demands that government act as a trustee in controlling and managing crucial natural assets. Held to strict fiduciary obligations, government must promote the interests of the citizen beneficiaries and ensure the sustained resource abundance necessary for society's endurance. The U.S. Supreme Court declared in *Geer v. Connecticut*: "[I]t is the duty of the legislature to enact such laws as will best preserve the subject of the trust, and secure its beneficial use in the future to the people of the state."³⁴ This duty arises as a limitation on government, an expectation that still smoulders in the popular sovereignty held by the people.

As a foundational property law principle, the trust doctrine imparts the original legal mechanism to ensure that government safeguards natural resources necessary for public welfare and survival. Long predating any statutory law, the reasoning of the public trust puts it on par with the highest liberties of citizens living in a free society. This public property right ranks so fundamental to citizens that some scholars describe it as a natural right or human right. As Professor Joseph Sax suggested more than four decades ago in a landmark article, the public trust responsibility underpins democracy itself, demarcating a society of "citizens rather than of serfs."³⁵

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The American lodestar public trust opinion declaring the citizens' fundamental right to natural resources is *Illinois Central Railroad Co. v. Illinois (Illinois Central)*. Announcing that the shoreline of Lake Michigan was held in public trust by the state of Michigan and could not be transferred to a private railroad corporation, the Supreme Court stated:

[T]he decisions are numerous which declare that such property is held by the state, by virtue of its sovereignty, in trust for the public. The ownership of the navigable waters of the harbor, and of the lands under them, is a *subject of public concern to the whole people of the state*. The trust with which they are held, therefore, is governmental, and cannot be alienated.³⁶

The essence of the doctrine requires trust management strictly for public benefit rather than for private exploit or political advantage. Simply stated, government trustees may not allocate rights to destroy what the people rightly own for themselves and for their posterity. Understood in this way, the trust imposes a fundamental constraint on governmental power. The *Geer* Court declared:

[T]he power or control lodged in the State, resulting from this common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from the public good.³⁷

Although the public trust doctrine lies embedded in scores of U.S. judicial decisions decided over the past century, it has been all but lost in the administrative jungle that now chokes environmental law. Many modern-day bureaucrats and politicians no longer see themselves as trustees of public property and resources. They view their roles as those of political decision makers, vested with statutory discretion to allow damage to natural resources through the permit system. The present statutory system fails to impose a corresponding duty adequate to bridle this breathtaking power.

Revived in modern bureaucracy, the trust would introduce an old-but-new limitation on government acting through statutory law. The trust injects fiduciary duty into government action affecting the environment. Strict and enforceable standards of performance stay necessary to secure the implicit confidence reposed by citizens in the trustee, who exercises power over vital assets. Trustees, bound by exacting fiduciary obligations to protect the assets of the trust, must manage them prudently and restore damaged assets. The trustee must act in good faith and out of absolute loyalty to the citizen beneficiaries.

From an established public trust foundation, the Nature's Trust paradigm proposes an organizing framework responsive to the new ecological era. But to do so,

it must push beyond current limitations associated with the public trust doctrine. While Sax's pioneering article suggested the trust as a cohesive paradigm for managing natural resources, much scholarship since has characterized the doctrine in an overly constrained manner. Law review articles tend to focus too much on a limited number of specific cases rather than on the bedrock fundamentals and the purposes animating the doctrine, both of which suggest broad potential to address modern crises. Some scholars express the public trust as a judicial tool, but they ignore the doctrine's fundamental applicability to the legislative and administrative branches of government. Many characterize the public trust as limited to water and wildlife, whereas the original rationale for the trust clearly extends to all natural resources needed by society. Some scholars assume the doctrine to be exclusively applicable to states, whereas its taproot lies in sovereign understandings that remain equally germane to the federal and local governments – both of which play key roles in today's environmental management. Much of the scholarship focuses on the public aspects of natural resource ownership without fully reconciling the doctrine with *private* property ownership – or explaining how ownership rules must adjust to a new era of natural scarcity and uncertainty. Few scholars have discussed in any detail how the trust might impart global obligations for planetary resources such as the oceans and atmosphere. And finally, the existing scholarship confines its characterization of the public trust to the legal sphere, whereas the trust also inspires as a political concept, an ethical mooring, a diplomatic framework, and an economic principle. This book builds on the public trust foundation to create a full paradigm shift in environmental law. Amid an ecological crisis, Nature's Trust principles instruct government to protect and restore the Earth endowment.

Part I of this book begins with a regulatory autopsy of environmental law, examining its many failure points. Chapter 1 provides a context for assessing legal dysfunction by recounting how President George W. Bush used high administrative offices to thwart carbon dioxide regulation under the Clean Air Act. Punctuating his administration's persistent regulatory obstruction to benefit the fossil fuel industry were clear warnings from the scientific community that government's failure to control carbon pollution would bring calamity to Earth's citizens. If any story shows the perils of agency politicization, this one does. Chapter 2 explores how administrative law now skews the balance of power among the three branches of government. Chapter 3 reveals the "politics of discretion," identifying portals through which industry influence gains entry to the administrative state. Chapter 4 lifts the veil on the political and industry maneuvering that persists behind a regulatory facade. Chapter 5 exposes a despotic administrative state resulting from a weakened judicial branch and a marginalized public.

Part II presents the Nature's Trust paradigm, which characterizes government's environmental duty as obligatory, inalienable, and fundamental to sovereignty

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itself. Chapter 6 describes an encompassing fiduciary limitation on the powers of government applicable on the federal, state, and local levels. Chapter 7 draws on the essential purposes of the trust to suggest that all natural assets, including air, atmosphere, oceans, rivers, wetlands, aquifers, forests, wildlife, and soils, comprise an "ecological *res*" that government must protect. Chapter 8 presents substantive standards of trust protection and restoration, and Chapter 9 discusses procedural duties incumbent on agency officials acting as trustees. Together, these two chapters characterize the trust obligation as an organic duty existing within the procedural edifice of statutory law, available to redirect agencies toward the task of rebuilding bankrupted natural assets. Chapter 10 outlines a property framework that organizes environmental obligations on a global scale. It positions multiple sovereigns as co-tenants of shared resources with mutual property-based obligations to prevent waste of common assets. Chapter 11 discusses how the judicial branch can enforce the people's trust through common law remedies using modern hybrid judicial/administrative tools.

Part III positions Nature's Trust within a broader social realm and weaves the trust approach with other transformative proposals that can guide society in a sustainable direction. Chapter 12 explores the moral and spiritual dimensions of the trust and suggests a powerful synergy between Nature's Trust and worldwide conservation faith movements. Chapter 13 describes how Nature's Trust principles reinforce contemporary initiatives toward natural capitalism. Chapter 14 explains the interface between private property rights and public property rights. It identifies the trust as an encumbrance on private title that has never been extinguished, an antecedent servitude that awakens even from long periods of dormancy to preserve natural infrastructure. Chapter 15 concludes the book by suggesting Nature's Trust as a paradigm capable of transcending cultures and national borders to catalyze citizen environmental democracy worldwide.

A POPULIST MANIFESTO

As this book will show, the legal dysfunction driving environmental law portends danger for all citizens. Far from protecting Nature, agencies now use their authority under environmental law to hospice a dying planet. Citizens of the world confront a monumental challenge: they must redirect the bureaucratic energy of their governments toward the epic task of rebuilding the assets in Nature's Trust. But transforming agencies requires a new way of thinking, a fresh characterization of normative values, and a robust set of legal footholds by which citizens can hold their government officials accountable. While no legal approach offers a panacea, the trust infuses existing environmental law and bureaucracy with a protective fiduciary purpose that can rise to modern ecological challenges. When taken to the global

level, the trust becomes a diplomatic framework from which international obligations emerge to protect the Earth endowment for all generations.

The sovereign trust obligation offers a catalyzing principle to citizens worldwide in their common struggle to hold government accountable for protecting life-systems. Nature's Trust and the primordial rights inculcating it create a populist manifesto that surfaces at epic times through the generations of humanity. These principles stand no less revolutionary for our time and our crises than the forcing of the Magna Carta on the English monarchy in 1215 or Mahatma Gandhi's great Salt March to the sea in 1930.³⁸ Resonating deeply and resolutely within the ancestral memory of humanity, trust principles must now revive to stir a global assertion of citizenship in defense of humanity and all future generations.

Environmental Failure: A Case for a New Green Politics

The U.S. environmental movement is failing – by any measure, the state of the earth has never been more dire. What’s needed, a leading environmentalist writes, is a new, inclusive green politics that challenges basic assumptions about consumerism and unlimited growth.

BY JAMES GUSTAVE SPETH

A specter is haunting American environmentalism – the specter of failure.

All of us who have been part of the environmental movement in the United States must now face up to a deeply troubling paradox: Our environmental organizations have grown in strength and sophistication, but the environment has continued to go downhill, to the point that the prospect of a ruined planet is now very real. How could this have happened?

Before addressing this question and what can be done to correct it, two points must be made. First, one shudders to think what the world would look like today without the efforts of environmental groups and their hard-won victories in recent decades.

However serious our environmental challenges, they would be much more so had not these people taken a stand in countless ways. And second, despite their limitations, the approaches of modern-day environmentalism remain essential: Right now, they are the tools readily at hand with which to address many pressing problems, including global warming and climate disruption. Despite the critique of American environmentalism that follows, these points remain valid.

Lost Ground

The need for appraisal would not be so urgent if environmental conditions were not so dire. The mounting threats point to an emerging environmental tragedy of unprecedented proportions.

Half the world’s tropical and temperate forests are now gone. The rate of deforestation in the tropics continues at about an acre a second, and has for decades. Half the planet’s wetlands are gone. An estimated 90 percent of the large predator fish are gone, and 75 percent of marine fisheries are now overfished or fished to capacity. Almost half of the corals are gone or are seriously threatened. Species are disappearing at rates about 1,000 times faster than normal. The planet has not seen such a spasm of extinction in 65 million years, since the dinosaurs disappeared. Desertification claims a Nebraska-sized area of productive capacity each year globally. Persistent toxic chemicals can now be found by the dozens in essentially each and every one of us.

The earth's stratospheric ozone layer was severely depleted before its loss was discovered. Human activities have pushed atmospheric carbon dioxide up by more than a third and have started in earnest the most dangerous change of all — planetary warming and climate disruption. Everywhere, earth's ice fields are melting. Industrial processes are fixing nitrogen, making it biologically active, at a rate equal to nature's; one result is the development of hundreds of documented dead zones in the oceans due to overfertilization. Freshwater withdrawals are now over half of accessible runoff, and water shortages are multiplying here and abroad.

The United States, of course, is deeply complicit in these global trends, including our responsibility for about 30 percent of the carbon dioxide added thus far to the atmosphere. But even within the United States itself, four decades of environmental effort have not stemmed the tide of environmental decline. The country is losing 6,000 acres of open space every day, and 100,000 acres of wetlands every year. About a third of U.S. plant and animal species are threatened with extinction. Half of U.S. lakes and a third of its rivers still fail to meet the standards that by law should have been met by 1983. And we have done little to curb our wasteful energy habits or our huge population growth.

Here is one measure of the problem: All we have to do to destroy the planet's climate and biota and leave a ruined world to our children and grandchildren is to keep doing exactly what we are doing today, with no growth in human population or the world economy. Just continue to generate greenhouse gases at current rates, just continue to impoverish ecosystems and release toxic chemicals at current rates, and the world in the latter part of this century won't be fit to live in. But human activities are not holding at current levels — they are accelerating, dramatically.

The size of the world economy has more than quadrupled since 1960 and is projected to quadruple again by mid-century. It took all of human history to grow the \$7 trillion world economy of 1950. We now grow by that amount in a decade.

The escalating processes of climate disruption, biotic impoverishment, and toxification, which continue despite decades of warnings and earnest effort, constitute a severe indictment of the system of political economy in which we live and work. The pillars of today's capitalism, as they are now constituted, work together to produce an economic and political reality that is highly destructive environmentally. An unquestioning society-wide commitment to economic growth at any cost; powerful corporate interests whose overriding objective is to grow by generating profit (including profit from avoiding the environmental costs their companies create, amassing deep subsidies and benefits from government, and continued deployment of technologies originally designed with little or no regard for the environment); markets that systematically fail to recognize environmental costs unless corrected by government; government that is subservient to corporate interests and the growth imperative; rampant consumerism spurred by sophisticated advertising and marketing; economic activity now so large in scale that its impacts alter the fundamental biophysical operations of the planet — all combine to deliver an ever-growing world economy that is undermining the ability of the earth to sustain life.

Are Environmentalists To Blame?

In assigning responsibility for environmental failure, there are many places to lay blame: the rise of the modern, anti-government right in American politics; a negligent media; the deadening complexity of today's environmental issues and programs, to mention the most notable. But a number of observers have placed much of the blame for failure on the leading environmental organizations themselves.

For example, Mark Dowie in his 1995 book *Losing Ground* notes that the national environmental organizations crafted an agenda and pursued a strategy based on the civil authority and good faith of the federal government. "Therein," he believes, "lies the inherent weakness and vulnerability of the environmental movement. Civil authority and good faith regarding the environment have proven to be chimeras in Washington." Dowie argues that the national environmental groups also "misread and underestimate[d] the fury of their antagonists."

The mainstream environmental organizations were challenged again in 2004 in the now-famous *The Death of Environmentalism*. In it, Michael Shellenberger and Ted Nordhaus write that America's mainstream environmentalists are not "articulating a vision of the future commensurate with the magnitude of the crisis. Instead they are promoting technical policy fixes like pollution controls and higher vehicle mileage standards — proposals that provide neither the popular inspiration nor the political alliances the community needs to deal with the problem." Shellenberger and Nordhaus believe environmentalists don't recognize that they are in a culture war — a war over core values and a vision for the future.

These criticisms and others stem from the fundamental decision of today's environmentalism to work within the system. This core decision grew out of the successes of the environmental community in the 1970s, which seemed to confirm the correctness of that approach. Our failure to execute a dramatic mid-course correction when circumstances changed can be seen in hindsight as a major blunder.

Here is what I mean by working within the system. When today's environmentalism recognizes a problem, it believes it can solve that problem by calling public attention to it, framing policy and program responses for government and industry, lobbying for those actions, and litigating for their enforcement. It believes in the efficacy of environmental advocacy and government action. It believes that good-faith compliance with the law will be the norm, and that corporations can be made to behave and will increasingly weave environmental objectives into their business strategies.

Today's environmentalism tends to be pragmatic and incrementalist — its actions are aimed at solving problems and often doing so one at a time. It is more comfortable proposing innovative policy solutions than framing inspirational messages. These characteristics are closely allied to a tendency to deal with effects rather than underlying causes. Most of our major environmental laws and treaties, for example, address the resulting environmental ills much more than their

causes. In the end, environmentalism accepts compromises as part of the process. It takes what it can get.

Today's environmentalism also believes that problems can be solved at acceptable economic costs — and often with net economic benefit — without significant lifestyle changes or threats to economic growth. It will not hesitate to strike out at an environmentally damaging facility or development, but it sees itself, on balance, as a positive economic force.

Environmentalists see solutions coming largely from within the environmental sector. They may worry about the flaws in and corruption of our politics, for example, but that is not their professional concern. That's what Common Cause or other groups do. Similarly, environmentalists know that the prices for many things need to be higher, and they are aware that environmentally honest prices would create a huge burden on the half of American families that just get by. But universal health care and other government action needed to address America's gaping economic injustices are not seen as part of the environmental agenda.

Today's environmentalism is also not focused strongly on political activity or organizing a grassroots movement. Electoral politics and mobilizing a green political movement have played second fiddle to lobbying, litigating, and working with government agencies and corporations.

A central precept, in short, is that the system can be made to work for the environment. In this frame of action, scant attention is paid to the corporate dominance of economic and political life, to transcending our growth fetish, to promoting major lifestyle changes and challenging the materialistic values that dominate our society, to addressing the constraints on environmental action stemming from America's vast social insecurity and hobbled democracy, to framing a new American story, or to building a new environmental politics.

Not everything, of course, fits within these patterns. There have been exceptions from the start, and recent trends reflect a broadening in approaches. Greenpeace has certainly worked outside the system, the League of Conservation Voters and the Sierra Club have had a sustained political presence, groups like the Natural Resources Defense Council and the Environmental Defense Fund have developed effective networks of activists around the country, the World Resources Institute has augmented its policy work with on-the-ground sustainable development projects, and environmental justice concerns and the emerging climate crisis have spurred the proliferation of grassroots efforts, student organizing, and community and state initiatives.

But organizations that were built to litigate and lobby for environmental causes or to do sophisticated policy studies are not necessarily the best ones to mobilize a grassroots movement or build a force for electoral politics or motivate the public with social marketing campaigns. These things need to be done, and to get them done it may be necessary to launch new organizations and initiatives with special strengths in these areas.

The methods and style of today's environmentalism are not wrongheaded, just far, far too

restricted as an overall approach. The problem has been the absence of a huge, complementary investment of time, energy, and money in other, deeper approaches to change. And here, the leading environmental organizations must be faulted for not doing nearly enough to ensure these investments were made.

America has run a 40-year experiment on whether this mainstream environmentalism can succeed, and the results are now in. The full burden of managing accumulating environmental threats has fallen to the environmental community, both those in government and outside. But that burden is too great. The system of modern capitalism as it operates today will continue to grow in size and complexity and will generate ever-larger environmental consequences, outstripping efforts to cope with them. Indeed, the system will seek to undermine those efforts and constrain them within narrow limits. Working only within the system will, in the end, not succeed — what is needed is transformative change in the system itself.

A New Environmental Politics

Environmental protection requires a new politics.

This new politics must, first of all, ensure that environmental concern and advocacy extend to the full range of relevant issues. The environmental agenda should expand to embrace a profound challenge to consumerism and commercialism and the lifestyles they offer, a healthy skepticism of growthmania and a redefinition of what society should be striving to grow, a challenge to corporate dominance and a redefinition of the corporation and its goals, a commitment to deep change in both the functioning and the reach of the market, and a powerful assault on the anthropocentric and contempocentric values that currently dominate.

Environmentalists must also join with social progressives in addressing the crisis of inequality now unraveling America's social fabric and undermining its democracy. It is a crisis of soaring executive pay, huge incomes, and increasingly concentrated wealth for a small minority, occurring simultaneously with poverty near a 30-year high, stagnant wages despite rising productivity, declining social mobility and opportunity, record levels of people without health insurance, failing schools, increased job insecurity, swelling jails, shrinking safety nets, and the longest work hours among the rich countries. In an America with such vast social insecurity, economic arguments, even misleading ones, will routinely trump environmental goals.

Similarly, environmentalists must join with those seeking to reform politics and strengthen democracy. What we are seeing in the United States is the emergence of a vicious circle: Income disparities shift political access and influence to wealthy constituencies and large businesses, which further imperils the potential of the democratic process to act to correct the growing income disparities. Corporations have been the principal economic actors for a long time; now they are the principal political actors as well. Neither environment nor society fares well under corporatocracy. Environmentalists need to embrace public financing of elections, regulation of lobbying, nonpartisan Congressional redistricting, and other political reform measures as core

to their agenda. Today's politics will never deliver environmental sustainability.

The current financial crisis and, at this writing, the response to it, reveal a system of political economy that is profoundly committed to profits and growth and profoundly indifferent to people and society. This system is at least as indifferent to its impacts on nature. Left uncorrected, it is inherently ruthless and rapacious, and it is up to citizens, acting mainly through government, to inject values of fairness and sustainability into the system. But this effort commonly fails because progressive politics are too enfeebled and Washington is increasingly in the hands of powerful corporate interests and concentrations of great wealth. The best hope for real change in America is a fusion of those concerned about environment, social justice, and strong democracy into one powerful progressive force.

The new environmentalism must work with this progressive coalition to build a mighty force in electoral politics. This will require major efforts at grassroots organizing; strengthening groups working at the state and community levels; and developing motivational messages and appeals — indeed, writing a new American story, as Bill Moyers has urged. Our environmental discourse has thus far been dominated by lawyers, scientists, and economists. Now, we need to hear a lot more from the poets, preachers, philosophers, and psychologists.

Above all, the new environmental politics must be broadly inclusive, reaching out to embrace union members and working families, minorities and people of color, religious organizations, the women's movement, and other communities of complementary interest and shared fate. It is unfortunate but true that stronger alliances are still needed to overcome the "silo effect" that separates the environmental community from those working on domestic political reforms, a progressive social agenda, human rights, international peace, consumer issues, world health and population concerns, and world poverty and underdevelopment.

The final watchword of the new environmental politics must be, "Build the movement." We have had movements against slavery and many have participated in movements for civil rights and against apartheid and the Vietnam War. Environmentalists are often said to be part of "the environmental movement." We need a real one — networked together, protesting, demanding action and accountability from governments and corporations, and taking steps as consumers and communities to realize sustainability and social justice in everyday life.

Can one see the beginnings of a new social movement in America? Perhaps I am letting my hopes get the better of me, but I think we can. Its green side is visible, I think, in the surge of campus organizing and student mobilization occurring today, much of it coordinated by the student-led Energy Action Coalition and by Power Vote.

It's visible also in the increasing activism of religious organizations, including many evangelical groups under the banner of Creation Care, and in the rapid proliferation of community-based environmental initiatives. It's there in the joining together of organized labor, environmental groups, and progressive businesses in the Apollo Alliance and there in the Sierra Club's collaboration with the United Steelworkers, the largest industrial union in the United States. It's

visible too in the outpouring of effort to build on Al Gore's *An Inconvenient Truth*, and in the grassroots organizing of 1Sky and others around climate change. It is visible in the green consumer movement and in the consumer support for the efforts of the Rainforest Action Network to green the policies of the major U.S. banks. It's there in the increasing number of teach-ins, demonstrations, marches, and protests, including the 1,400 events across the United States in 2007 inspired by Bill McKibben's "Step It Up!" campaign to stop global warming. It is there in the constituency-building work of minority environmental leaders and in the efforts of groups like Green for All to link social and environmental goals. It's just beginning, but it's there, and it will grow.

The welcome news is that the environmental community writ large is moving in some of these directions. Local and state environmental groups have grown in strength and number. There is more political engagement through the League of Conservation Voters and a few other groups, and more work to reach out to voters with overtly political messages. The major national organizations have strengthened their links to local and state groups and established activist networks to support their lobbying activities. Still, there is a long, long way to go to build a new and vital environmental politics in America.

American politics today is failing not only the environment but also the American people and the world. As Richard Falk reminds us, only an unremitting struggle will drive the changes that can sustain people and nature. If there is a model within American memory for what must be done, it is the civil rights revolution of the 1960s. It had grievances, it knew what was causing them, and it also knew that the existing order had no legitimacy and that, acting together, people could redress those grievances. It was confrontational and disobedient, but it was nonviolent. It had a dream. And it had Martin Luther King Jr.

It is amazing what can be accomplished if citizens are ready to march, in the footsteps of Dr. King. It is again time to give the world a sense of hope.

ABOUT THE AUTHOR

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WANTED: ENVIRONMENTAL LEADER

*From: Freyfogle, Agrarianism
and the Good Society (2007)*

The United States is currently seeking one or more national environmental leaders. Applications for the position are invited, especially from individuals, resident or nonresident, who have a capacity to stand back from U.S. culture and reflect critically upon it. Applicants will be screened based on their knowledge, character, and personal skills. No formal academic qualifications are required (but see below for our additional screening of applicants who have received PhD's).

Duties

A national environmental leader must (1) help the people of the United States awaken to their environmental predicament, in its ecological and cultural complexity; (2) stimulate a yearning for better ways of dwelling on land and living with one another; and (3) insofar as possible, provoke the various cultural changes without which the country cannot achieve healthy lands and healthy people. The more particular tasks of the position, and warnings about hazards, appear in the material below. Given the nature of the underlying challenges, a long-term commitment is essential.

Qualifications

We seek a person of rare understanding, talent, and motivation; a

person who is at once embedded in the modern age and yet experiences substantial detachment from it.

Our ideal candidate will present a background of eclectic personal experiences, in terms of interactions with people, nature, and serious thought. A wide-ranging curiosity is vital, as are an ability to reason clearly and a strong, even zealous commitment to the common good. The candidate will possess exceptional skills in communication, including the capacity to connect with varied audiences and a limitless patience in handling fools. The visionless, the impatient, and the readily depressed need not apply. A simmering anger and an inner frustration are acceptable, even desirable, if matched with a willingness to labor cheerfully against overwhelming odds.

A successful candidate must understand nature and its ecological and evolutionary processes, at varied spatial scales and over time. Detailed knowledge of a single scientific field is neither required nor particularly desired, and excellence in a single field will not excuse noticeable gaps in a candidate's breadth of understanding. A candidate's grasp of nature should feature evident strength in ecology, both as a body of knowledge and as a tool for gaining new knowledge. It must include, in addition to the basics of ecological interconnection and interdependence, an ability to talk sensibly to diverse audiences about (1) the limits on what we currently know about nature and (2) the recurring ways that scientific concepts, particularly about nature's overall functioning, are influenced by social and political values external to science.

Just as essential as knowing about nature will be a candidate's grasp of the human predicament, in its varied moral, social, cultural, and political aspects. We intend, on this general subject, to evaluate candidates carefully. Special attention will be paid to a candidate's ideas and sentiments on the following three topics.

Our environmental problems. Americans readily ignore the reality that our "environmental" problems are, at base, problems that relate to human behavior rather than problems inherent in the natural environment. Confusion on the point remains widespread, so much so as to provide a window on where American culture now stands.

Americans talk about environmental ills as if the planet itself were somehow to blame for them, rather than people and the ways we live. Our hope is that applicants in their submissions can propose particular ways to talk about nature and culture so as to highlight (forcefully but without insult) the deficiencies in the ways we dwell on land. Ideas are also welcome on ways to clarify the root causes of land degradation, within modern culture and within the institutions governing modern life (on which, more below). Here, too, Americans are in denial: They view instances of bad land use (polluted rivers, for instance) as discrete problems rather than as symptoms of deeper, more pervasive failings. The obvious fevers they admit, however reluctantly, but the underlying diseases they overlook. Their blindness here, naturally enough, is linked to their exuberant righteousness. Looking ahead, can Americans keep this moral confidence while becoming more aware of the harms that they cause to nature, one another, and future life? For the environmental leader, this question will linger, as a challenge and a hope.

Cultural criticism. Given how modern culture influences individual behavior, a successful candidate must firmly grasp the axial strands of modernity—the worldview, often traced to the Enlightenment, that so thoroughly pervades the era that we are essentially blind to it. Its major elements, as they relate to humans in nature, might be summed up in this way:

- Humans are distinct from other life forms; they are the sole possessors of moral value on the planet.
- Humans are best understood as autonomous individuals guided by reason and calculated self-interest.
- Individual humans possess rights, and their sole moral duty is to respect the rights of other individuals.
- Neither the dead nor the unborn possess rights, and thus neither enter into moral calculations.¹
- Nature is mostly physical stuff that awaits our free use.
- Nature is complex and challenging to study (hence the Nobel prizes given out), yet ultimately it is no more than an intricate

mechanism; one day we will understand this mechanism and control it pretty fully.

- Our decisions about using this complex nature are rightly based on the knowledge we gain through empirical data collection; we need not include other forms of knowledge, nor should we adjust decisions to take into account our ignorance.
- A person's links to the places where she lives and works are entirely optional and easily severed; to no appreciable degree is a person constituted by that landscape, dependent on it, or properly defined in terms of it.
- In time, human cleverness can and will solve all problems.

A strong candidate for environmental leader must grasp the deficiencies (as well as the virtues) of these influential conceits. The ideal candidate, going further, should be able to awaken Americans to these shortcomings—helping people see how these embedded assumptions powerfully shape what they perceive, what they value, and even how they think. It hardly needs noting that this educational task will prove daunting. Americans embrace liberal individualism with passionate intensity. It is, in the common view, the appropriate if not inevitable end to moral progress (the “end of man”). Liberty, the key cultural value in this complex, is defined in such a way that only living individual humans possess it. This fragmented view of society-as-autonomous-individuals is strikingly similar to the prevailing view about nature. It, too, is viewed chiefly as a collection of parts rather than an integrated whole. Some of the parts are valuable (natural resources); most of them are not. All or nearly all are suitable objects of private ownership.

These prevailing ideas sink deep roots within the “free” market—the institution that now dominates and defines American society. No liberal institution has ever wielded such power. For the environmental leader, the market will be an occasional friend and a constant, well-armed opponent. In the market and thus in America generally, value is established chiefly by the purchasing decisions of people with money. Because of this, only living people count for anything. This is so in practical terms, and thus it is a moral truth.

Nature enjoys value only when humans pay to protect it; future generations are respected only in the same way.

Challenging and countering these cultural assumptions will make up a good part of the job of the environmental leader. In some way, the leader must promote cultural ideals that recognize the ways humans are integrated into nature and with one another. The leader must instill ways of understanding that admit human ignorance and the limits on reason while embracing broader moral values and showing respect for the long term.

Good land use. Environmental ills are perhaps best understood simply as forms of bad land use (so long as we define "land" broadly to include all of nature's components operating as an integrated system). To speak of bad land use, however, is to presume some standard that distinguishes the good from the bad. At the moment we have no such standard, and few Americans, conservation leaders included, have thought seriously about it. An ideal environmental leader will have done so and should be able to help others think about it as well.

For decades now, arguments have taken place over which tools we should use in promoting environmental progress: regulation, economic incentives, disclosure requirements, trade sanctions, publicly funded research, hard-look study rules, new decision-making processes, and the like. Meanwhile, hardly anyone takes time to define environmental progress—the overall goal—other than in fragmented ways (clean air, clean water, protected species). If conservation succeeded overall, what would success look like? Vague terms are tossed out for consideration: sustainability, ecosystem management, sustaining ecosystem services. But they capture only part of the story. Yes, we need to plan for the long term (sustainability). Yes, we need to think about broad spatial scales (ecosystem management). And yes, we need to respect nature's fundamental ecological processes or "services" (the most useful of the three terms). But there is more to it.

Good land use would take into account the full range of human needs, including aesthetics and the comforts of living in sensibly arranged communities. A constellation of ethical and religious con-

siderations are also relevant, particularly ones relating to future generations and rare species. In some way good land use would pay attention to our ignorance about nature and to the wisdom of acting cautiously in the face of that ignorance, avoiding bets that we cannot afford to lose. Merely to scratch the surface of these many factors relevant to good land use is to bump repeatedly into nature and into the wisdom of respecting nature's ways. Good science is required, of course, to make many of these decisions, but science rarely provides answers on its own. It must be brought together with an array of normative considerations, and the work of bringing them together is not easy.

On this key issue—distinguishing land use from land abuse—an environmental leader will confront an especially discomfiting reality. The U.S. environmental movement is highly fragmented. Groups compete more than they cooperate, and they rarely support unified messages. The movement as a whole has no overall goal, and apparently no way even to formulate such a goal. With the conservation movement so voiceless, it is easy for critics to accuse the movement of misanthropy and other vices. Thus many citizens assume (wrongly) that conservation means favoring nature over people; they are unaware that people are embedded in nature and ultimately dependent on nature's healthy functioning. For the environmental leader, the difficulties here will be vast. Environmental groups of course can be allies, but absent a sea change in institutional cultures, the groups will be slow to work in concert.

The selection process for this position will turn on the above factors and on a candidate's understanding of the major institutional components of modern society. We identify five of these components because of their critical roles in shaping the ways people relate to nature. An ideal candidate will show deep understandings of these institutions and will propose ways, as appropriate, to reform them and to keep them in their proper places.

The free market. Foremost—as noted—is the free market, which orchestrates most resource-use practices of Americans. So immersed are Americans in the market that they rarely think about

what it is and what it can do. Market failures are poorly identified, particularly the market's inability to promote sensible land-use practices. Unleash the market, and all will be well—so it is said and so many Americans believe. Turn all of nature into private property, and the market's invisible hand will promote conservation while shifting resources to their highest and best uses. This refrain, too, is often heard. Just enough truth resides in these contentions to give them social traction. Necessarily, sound environmental policy would keep the market within limits, to protect nature's functioning and to fulfill our felt ethical duties to future generations, other life, and one another. Alas, we are a long way from having such limits in place. We are even far from knowing what the limits ought to be.

Science. Americans are less emotionally attached to science, yet it too enjoys respect, and they are equally poor in understanding what it can and cannot do. The call has long gone out to base our environmental policies on "sound science." We utter this position without recognizing that science alone is unable to distinguish good land uses from bad ones. Science provides only bits and pieces of what we require to assemble a vision of good land use. Particularly muddled is our thinking about a critical moral question: how much evidence should we require about a potential environmental problem before deciding to take action? In the case of potential terrorist threats, we act on evidence that is slight and unreliable. Why then should we wait until an environmental ill is scientifically "proven" (as some claim we should) in the sense of being supported at a confidence level of at least 95 percent? And why limit our consideration, when we judge dangers, to evidence that itself qualifies as "scientific"? We impose no such requirement in any other area of public policy, and it makes no sense here. Is it wise to sit back and do nothing simply because a problem is only 80 percent likely to happen? Should we wait before acting until scientists take note of facts that are evident to ordinary people? How are the huge gaps in what science knows taken into account?

For the environmental leader, hardly any constellation of problems will be more knotty than those having to do with science and

its rightful roles. Of course good science is better than bad science, so we should insist that science be as good as reasonably possible. But it rarely makes sense to require scientific proof before acting, nor is it wise to insist that people who care about the environment always bear the burden of proof. All relevant evidence should be weighed, whether or not it has been vetted in peer-reviewed studies. Too often the call to give science a bigger role is merely a huge wrench thrown into the gears of environmental policy making to cause a breakdown. The demand for more science brings delays and inaction. It can raise high if not impossible barriers to sensible solutions. It can sow doubt where very little exists, while challenging the integrity of citizens who warn of environmental threats. Worst of all, it can turn fundamental policy questions into seemingly technical issues in ways that disarm and disenfranchise concerned citizens.

Public governance. Along with the market and science there is the whole matter of public governance and the disturbing lack of good mechanisms for citizens collectively to formulate sensible land-use goals. Democracy in America is sick, particularly when it comes to decision making about our shared natural homes. Landscapes remain ecologically integrated no matter what we do to them. That reality does not change when we fragment the landscapes among landowners and political jurisdictions. Many land-use goals are achievable only when plans are prepared on a landscape or watershed scale. If good land use is to come about, collective action is thus essential, which means democratic engagement is essential. An untiring environmental leader is needed to help bring it about.

The challenge here, in terms of decision-making mechanisms, goes well beyond reviving democracy, sapping power from big money, and getting power back to citizens. New mechanisms are urgently needed so that people can gather and give thought to their shared landscapes and to ways of making them better. Study and deliberation are essential; it is not enough to rely on responses to public opinion surveys. Sound governance mechanisms would pay attention to nature's own lines—particularly its rivers and watersheds—more than to the arbitrary lines that people draw on maps.

Inevitably, many environmental challenges will require study and action at varying spatial scales, from local to national to global. This means there is need to allocate power among levels of government. What power should go to what level? And what happens when one level of government fails to do its job? A well-prepared environmental leader will offer answers or at least stimulate good thought.

Higher education. All of these tasks would be easier if America could look for help to its institutions of higher education. But higher education has become as much a part of the problem as it is a solution. Academic knowledge is ever more fragmented. Fewer scholars can grasp the whole of things or sensibly assemble the many intellectual pieces. In truth, the market's tentacles have replaced the ivy on our university towers. Today's academy helps design market products and prepares students to be good producers and consumers. Meanwhile, it gives diminishing thought to reforming society and producing good citizens. Academic research is largely about generating new facts and building technology, not about probing normative issues, tracing problems to cultural flaws, or painstakingly distilling diffuse knowledge into usable wisdom. Colleges train students to be inhabitants of the world, which is to say inhabitants of no place in particular.

Universities are hardly more aware than citizens generally that our environmental problems have to do with behavior and culture. At the typical institution, environmental studies is merely a collection of applied sciences with a few economists and policy people tossed in. The group is little more than the sum of its narrowly focused parts. Few programs recognize that sound environmental thought takes place at higher levels of synthesis and integration. An ideal environmental leader should thus be forewarned: Do not look for peers within the academy (though useful allies can be found). Should you reach out to the academy, the likely response will be disdain for your alleged lack of disciplinary rigor. In today's academic pecking order, status is reserved for the high-yielding specialist. Nay, matters are even worse. It is reserved for the specialist who obtains and spends the most research money. Research output is important chiefly insofar as it leads to higher monetary inputs.

For these reasons, we must make the following special note for candidates with PhD's. Although they are eligible to apply for this position, they must in their applications provide evidence that they are able, despite their training, to think broadly about issues of nature and culture. They must give evidence of a capacity to make full use of varied disciplinary perspectives. In particular, holders of doctorates in scientific fields must include with their applications an essay that (1) identifies and evaluates the limits of science and scientific research models and (2) explains why additional scientific research is unlikely to solve most environmental ills. Holders of doctorates in economics must include a detailed critique of the assumptions of neoclassical economics and explain clearly why and how contemporary economic thought has exacerbated the major flaws in contemporary culture.

Private property. The final special challenge that an environmental leader will face is the institution of private property. Americans hold it particularly dear, and confusion over this institution is hardly less than it is with the market and science. Scarcely anyone seems to understand how private property works, in terms of using government power to restrict the liberties of people other than the landowner. Americans assume that private property means being able to use your land any way you like with little regard for consequences. This is a far cry from where landownership stood two centuries ago, when sensitive land uses were protected against interference by noisy neighbors. Private property is the most important institutional mechanism that allocates decision-making power over land. Bad land use is often the result of bad decisions of private owners. The institution cries out for reform.

In one sense, though, it is not private property that is the real problem. Private ownership is a flexible arrangement. Landowner rights can be redefined by law in ways that require owners to act responsibly. When sensitively structured, the institution can become a good tool to promote healthy lands. The true problem, then, resides deeper. It resides, as usual, in the minds and guts of Americans. Failing to understand the institution, we have essentially lost control of it. We do not know how it works, nor do we

realize the many policy choices embedded in it. So far as most people can tell, the conflict today is about whether we will or will not protect private ownership rights securely. The truth is quite otherwise. This issue is not whether we will protect property but how will we define private property, in terms of the rights and responsibilities of owners. Our blindness on this critical issue goes far toward explaining why land-use democracy is so weak. When we instinctively hand managerial power over to private owners, leaving them largely free to act as they like, what power is then left for the demos?

Working Conditions

Many Americans are prepared to help a national environmental leader. Indeed, the vast majority are likely to do so. That is the good news. But first a leader needs to get their attention, and that will prove hard. The institutional obstacles noted above—love of the market, confusion over science, weak democracy, diverted academies, inflexible property regimes—are all deeply entrenched. To this mix we should add a news industry that mischaracterizes environmental issues (in the name of making them understandable), a constant flow of corporate greenwashing, and pro-industry political groups that deliberately sow confusion. Mix these together, and we have the makings of a true mess.

Dealing with this cultural mess will be the environmental leader's prime job. An able leader naturally will be alert for allies. And they are out there, waiting to be found. Many of them will come from religious groups who are ready to hear about the ways that land health is a moral good. Other allies will reside on small farms and in settled neighborhoods. They are ready to rise up when told about the ways that citizens can wrest control over their natural homes from developers and industrial land users. Deep down, many Americans sense that scientists know less than they claim. These citizens, too, could respond when they realize that much of what passes for science goes well beyond it. All Americans respect private property, and rightfully so. What they await (though they may not know it) is news about how they can respect private prop-

erty while insisting that landowners behave in responsible ways. They simply need to realize that they can have it all.

Finally, there is the largest of all groups of potential allies. They are the citizens who care about nature but who have trouble imagining how things might be different. Surrounding landscapes, they sense, could be far better than they are. But what could they look like? If we lived well on land, how would we be living? More than anything, Americans need a vision of a better way, a way that respects nature and keeps it close at hand; a way that honors health above wealth and that prepares for generations unborn. An ideal environmental leader, then, would hold high a torch, not to identify that better way precisely but to illuminate the path that can lead toward it. We need strong light, and soon.

Timetable

The application period for this position is unlikely to close, and applications will be reviewed as received. In the event one environmental leader is found, the search will continue for others, perhaps without end.

Note

1. One early challenge that an environmental leader will confront is the confused rhetoric used by opponents of legalized abortion, who employ the label "pro-life" yet unashamedly define "life" so as to exclude nearly all forms of life found on the planet. They show little or no interest in respecting the essential processes upon which all life depends, people included. That this use of the term "life" goes unquestioned in contemporary politics provides evidence of the firm grip of Enlightenment thought and highlights the cultural barriers to the emergence of a true agriculture.

The Washington Post

To really save the planet, stop going green

By Mike Tidwell
Sunday, December 6, 2009

As President Obama heads to Copenhagen next week for global warming talks, there's one simple step Americans back home can take to help out: Stop "going green." Just stop it. No more compact fluorescent light bulbs. No more green wedding planning. No more organic toothpicks for holiday hors d'oeuvres.

December should be national Green-Free Month. Instead of continuing our faddish and counterproductive emphasis on small, voluntary actions, we should follow the example of Americans during past moral crises and work toward large-scale change. The country's last real moral and social revolution was set in motion by the civil rights movement. And in the 1960s, civil rights activists didn't ask bigoted Southern governors and sheriffs to consider "10 Ways to Go Integrated" at their convenience.

Green gestures we have in abundance in America. Green political action, not so much. And the gestures ("Look honey, another Vanity Fair Green Issue!") lure us into believing that broad change is happening when the data shows that it isn't. Despite all our talk about washing clothes in cold water, we aren't making much of a difference.

For eight years, George W. Bush promoted voluntary action as the nation's primary response to global warming -- and for eight years, aggregate greenhouse gas emissions remained unchanged. Even today, only 10 percent of our household light bulbs are compact fluorescents. Hybrids account for only 2.5 percent of U.S. auto sales. One can almost imagine the big energy companies secretly applauding each time we distract ourselves from the big picture with a hectoring list of "5 Easy Ways to Green Your Office."

As America joins the rest of the world in finally fighting global warming, we need to bring our battle plan up to scale. If you believe that astronauts have been to the moon and that the world is not flat, then you probably believe the satellite photos showing the Greenland ice sheet in full-on meltdown. Much of Manhattan and the Eastern Shore of Maryland may join the Atlantic Ocean in our lifetimes. Entire Pacific island nations will disappear. Hurricanes will bring untold destruction. Rising sea levels and crippling droughts will decimate crops and cause widespread famine. People will go hungry, and people will die.

Morally, this is sort of a big deal. It would be wrong to let all this happen when we have the power to prevent the worst of it by adopting clean-energy policies.

But how do we do that? Again, look to the history of the civil rights struggle. After many decades of public denial and inaction, the civil rights movement helped Americans to see Southern apartheid in moral terms. From there, the movement succeeded by working toward legal change. Segregation was phased out rapidly only because it was phased out through the

law. These statutes didn't erase racial prejudice from every American heart overnight. But through them, our country made staggering progress. Just consider who occupies the White House today.

All who appreciate the enormity of the climate crisis still have a responsibility to make every change possible in their personal lives. I have, from the solar panels on my roof to the Prius in my driveway to my low-carbon-footprint vegetarian diet. But surveys show that very few people are willing to make significant voluntary changes, and those of us who do create the false impression of mass progress as the media hypes our actions.

Instead, most people want carbon reductions to be mandated by laws that will allow us to share both the responsibilities and the benefits of change. Ours is a nation of laws; if we want to alter our practices in a deep and lasting way, this is where we must start. After years of delay and denial and green half-measures, we must legislate a stop to the burning of coal, oil and natural gas.

Of course, all this will require congressional action, and therein lies the source of Obama's Copenhagen headache. To have been in the strongest position to negotiate a binding emissions treaty with other world leaders this month, the president needed a strong carbon-cap bill out of Congress. But the House of Representatives passed only a weak bill riddled with loopholes in June, and the Senate has failed to get even that far.

So what's the problem? There's lots of blame to go around, but the distraction of the "go green" movement has played a significant role. Taking their cues from the popular media and cautious politicians, many Americans have come to believe that they are personally to blame for global warming and that they must fix it, one by one, at home. And so they either do as they're told -- a little of this, a little of that -- or they feel overwhelmed and do nothing.

We all got into this mess together. And now, with treaty talks underway internationally and Congress stalled at home, we need to act accordingly. Don't spend an hour changing your light bulbs. Don't take a day to caulk your windows. Instead, pick up a phone, open a laptop, or travel to a U.S. Senate office near you and turn the tables: "What are the 10 green statutes you're working on to save the planet, Senator?"

Demand a carbon-cap bill that mandates the number 350. That's the level of carbon pollution scientists say we must limit ourselves to: 350 parts per million of CO₂ in the air. If we can stabilize the atmosphere at that number in coming decades, we should be able to avoid the worst-case scenario and preserve a planet similar to the one human civilization developed on. To get there, America will need to make deep but achievable pollution cuts well before 2020. And to protect against energy price shocks during this transition, Congress must include a system of direct rebates to consumers, paid for by auctioning permit fees to the dirty-energy companies that continue to pollute our sky.

Obama, too, needs to step up his efforts; it's not just Congress and the voters who have been misguided. Those close to the president say he understands the seriousness of global warming.

But despite the issue's moral gravity, he's been paralyzed by political caution. He leads from the rear on climate change, not from the front.

Forty-five years ago, President Lyndon B. Johnson faced tremendous opposition on civil rights from a Congress dominated by Southern leaders, yet he spent the political capital necessary to answer a great moral calling. Whenever key bills on housing, voting and employment stalled, he gave individual members of congress the famous "Johnson treatment." He charmed. He pleaded. He threatened. He led, in other words. In person, and from the front.

Does anyone doubt that our charismatic current president has the capacity to turn up the heat? Imagine the back-room power of a full-on "Obama treatment" to defend America's flooding coastlines and burning Western forests. Imagine a two-pronged attack on the fickle, slow-moving Senate: Obama on one side and a tide of tweets and letters from voters like you.

So join me: Put off the attic insulation job till January. Stop searching online for recycled gift wrapping paper and sustainably farmed Christmas trees. Go beyond green fads for a month, and instead help make green history.

Mike Tidwell is the executive director of the Chesapeake Climate Action Network.

Guardian (London) March 15, 2010

How going green may make you mean

Ethical consumers less likely to be kind and more likely to steal, study finds

When Al Gore was caught running up huge energy bills at home at the same time as lecturing on the need to save electricity, it turns out that he was only reverting to "green" type.

According to a study, when people feel they have been morally virtuous by saving the planet through their purchases of organic baby food, for example, it leads to the "licensing [of] selfish and morally questionable behaviour", otherwise known as "moral balancing" or "compensatory ethics".

Do Green Products Make Us Better People is published in the latest edition of the journal Psychological Science. Its authors, Canadian psychologists Nina Mazar and Chen-Bo Zhong, argue that people who wear what they call the "halo of green consumerism" are less likely to be kind to others, and more likely to cheat and steal. "Virtuous acts can license subsequent asocial and unethical behaviours," they write.

The pair found that those in their study who bought green products appeared less willing to share with others a set amount of money than those who bought conventional products. When the green consumers were given the chance to boost their money by cheating on a computer game and then given the opportunity to lie about it – in other words, steal – they did, while the conventional consumers did not. Later, in an honour system in which participants were asked to take money from an envelope to pay themselves their spoils, the greens were six times more likely to steal than the conventionals.

Mazar and Zhong said their study showed that just as exposure to pictures of exclusive restaurants can improve table manners but may not lead to an overall improvement in behaviour, "green products do not necessarily make for better people". They added that one motivation for carrying out the study was that, despite the "stream of research focusing on identifying the 'green consumer'", there was a lack of understanding into "how green consumption fits into people's global sense of responsibility and morality and [how it] affects behaviours outside the consumption domain".

The pair said their findings surprised them, having thought that just as "exposure to the Apple logo increased creativity", according to a recent study, "given that green products are manifestations of high ethical standards and humanitarian considerations, mere exposure" to them would "activate norms of social responsibility and ethical conduct".

Dieter Frey, a social psychologist at the University of Munich, said the findings fitted patterns of human behaviour. "At the moment in which you have proven your credentials in a particular area, you tend to allow yourself to stray elsewhere," he said.

What is Motivated Reasoning? How Does It Work? Dan Kahan Answers

By Chris Mooney | May 5, 2011 8:32 am

I recently came across this post at Science & Religion Today, authored by Dan Kahan, who is the Elizabeth K. Dollard Professor at Yale Law School. It clarifies so many important issues about motivated reasoning—what it is, what it isn't—that I asked Kahan if I could repost it here, as I think it deserves very wide circulation. He said okay. So here goes:

Recently, scholars and commentators have drawn attention to the contribution of “motivated cognition” to diverse political conflicts, including climate change and the birthplace of President Obama. I will offer a few points to help people assess such claims.

1. To begin, motivated cognition refers to the unconscious tendency of individuals to fit their processing of information to conclusions that suit some end or goal. Consider a classic example. In the 1950s, psychologists asked experimental subjects, students from two Ivy League colleges, to watch a film that featured a set of controversial officiating calls made during a football game between teams from their respective schools. The students from each school were more likely to see the referees' calls as correct when it favored their school than when it favored their rival. The researchers concluded that the emotional stake the students had in affirming their loyalty to their respective institutions shaped what they *saw* on the tape.

The end or goal *motivates* the cognition in the sense that it directs mental operations—in this case, sensory perceptions; in others, assessments of the weight and credibility of empirical evidence, or performance of mathematical or logical computation—that we expect to function independently of that goal or end. But the normal connotation of “motive” as a conscious goal or reason for acting is actually out of place here and can be a source of confusion. The students *wanted* to experience solidarity with their institutions, but they didn't treat that as a conscious *reason* for seeing what they saw. They had no idea (or so we are to believe; one needs a good experimental design to be sure this is so) that their perceptions were being bent in this way.

2. Motivated cognition is best understood as a description or characterization of a process and *not* an explanation in and of itself. For a genuine explanation, we need to know, at a minimum, what the need or goal was that did the motivating (or directing) of the agent's mental processing and the precise cognitive mechanism or mechanisms through which it operated to generate the goal-supporting perceptions or beliefs.

Examples of the goals or needs that can motivate cognition are diverse. They include fairly straightforward things, like a person's financial or related interests. But they reach more intangible stakes, too, such as the need to sustain a positive self-image or protect connections to others with whom someone is intimately connected and on whom someone might well depend for support, emotional or material.

The mechanisms are also diverse. They include dynamics such as biased information search, which involves seeking out (or disproportionately attending to) evidence that is congruent rather than incongruent with the motivating goal; biased assimilation, which refers to the tendency to credit and discredit evidence selectively in patterns that promote rather than frustrate the goal; and identity-protective cognition, which reflects the tendency of people to react dismissively to information when accepting it would cause them to experience dissonance or anxiety. Identifying these more concrete and empirically established mechanisms and giving a plausible and textured account of how they are at work is critical; otherwise, assertions of “motivated cognition” become circular—“x believes that because it was useful; the evidence is that it was useful for x to believe that.”

3. To be sure, motivated cognition can make us stupid, but it is not a consequence of stupidity. Social psychologists and behavioral economists distinguish between two forms of reasoning: “System 1,” which is rapid, intuitive, emotional, and prone to bias, and “System 2,” which is more deliberate, more reflective, more dispassionate, and (it is said) more accurate. A long line of research in social psychology, however, shows that “motivated cognition” spans the divide—that is, that needs and goals can unconsciously steer not only rapid “gut” reactions, but also even more systematic forms of analysis that are thought to be examples of “System 2.” Indeed, some researchers have shown that expert scientists are at least sometimes prone to motivated reasoning—that they conform the performance of their reflective and deliberate evaluations of evidence to the desire they have to see exciting conclusions vindicated and disfavored ones rejected. Scary stuff. And humbling (unless as a result of motivated reasoning we see evidence of its operation only in those who disagree with us—in which case, motivated reasoning makes us anything but humble).

4. Work on motivated cognition and political conflict tends to focus more on the need for maintaining a valued identity, particularly as a member of a group. It is certainly plausible that an individual would employ one or another of the mechanisms for motivated cognition to advance her economic interests. But the seeming inability of economic interests to explain who believes what on issues such as climate change, the HPV vaccine, one or another economic policy involving tax cuts or social welfare spending, and the like is in fact the motivation—as it were—for examining the contribution that identity-protective forms of motivated cognition are making.

Dan Kahan is the Elizabeth K. Dollard Professor of Law and a member of the Cultural Cognition Project at Yale Law School.

Second National Risk & Culture Study

Tuesday, June 2, 2009 at 8:59AM

Americans are culturally polarized on a range of societal risks--from global warming to domestic terrorism, from school shootings to vaccination of school-age girls for HPV. Reporting the results of surveys and experiments involving some 5,000 Americans, the study identifies the causes of this condition and steps that can be taken to counteract it.

The Second National Risk and Culture Study reports the results of studies conducted as part of the Mechanisms of Cultural Cognition Project, funded by the National Science Foundation and the Oscar M. Ruebhausen Fund at Yale Law School. Studies were conducted over a nine month period and involved a diverse sample of some 5,000 Americans.

Principal findings include:

- Individuals of diverse cultural outlooks--hierarchical and egalitarian, individualistic and communitarian--hold sharply opposed beliefs about a range of societal risks, including those associated with climate change, gun ownership, public health, and national security. Differences in these basic values exert substantially more influence over risk perceptions than does any other individual characteristic, including gender, race, socioeconomic status, education, and political ideology and party affiliation.

- In the wake of the mass shooting at Virginia Tech in April 2007, Americans were culturally polarized on whether stronger gun control measures at schools and universities would reduce the incidence of campus gun massacres or instead render it more difficult for students and teachers to defend themselves against such attacks. The tragedy did not change public views on gun control overall.

- In the future, there is a substantial likelihood that Americans will become culturally polarized over what are currently novel, relatively low profile risk issues, including the dangers associated with nanotechnology and the vaccination of school age girls against HPV infection. The source of such divisions is the tendency of individuals to process factual information about risk in a manner that fits cultural predispositions.

- Individuals' expectations about the policy solution to global warming strongly influences their willingness to credit information about climate change. When told the solution to global warming is increased antipollution measures, persons of individualistic and hierarchic worldviews become less willing to credit information suggesting that global warming exists, is caused by humans, and poses significant societal dangers. Persons with such outlooks are more willing to credit the same information when told the solution to global warming is increased reliance on nuclear power generation.

- How individuals respond to arguments about the risks associated with mandatory HPV vaccination for school age girls is highly dependent on the perceived values of the persons making such arguments. Individuals who are culturally predisposed to a particular position are even more likely to form that view when it is espoused by an advocate who shares their cultural outlooks. Such individuals are less likely to form that view--and cultural polarization is reduced--when a person who shares their values advocates a position on the HPV vaccination that is contrary to such individuals' cultural predispositions.

Searching for Common Ground: Ecofeminism and Bioregionalism

Judith Plant

It is no accident that the concept of ecofeminism has emerged from the many tendencies within the movement for social change. Women and nature have had a long association throughout history and it is only now that the deepest meanings of this association are being understood. Just as ecologists have paid critical attention to the attitudes, social structures, and rationalizations that have allowed the rape of the earth, so have feminists dug deeply to understand why society has rendered them second class citizens, at best.

Both schools of thought are now converging with similar analyses. The difference is that ecologists are scientists, basing their views of the interconnectedness of all things on the intellect, whereas feminists cannot help but come from the school of experience and have sought intellectual frameworks in order to try to make sense of their experience of subjugation. The coming together of the two

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gives us hope for an understanding of the world that has the potential to be rooted in "thinking feelingly".

ECOLOGY AND WOMEN

Ecology is the study of the interdependence and interconnectedness of all living systems. As ecologists look at the consequences of changes in the environment, they are compelled to be critical of society. Because the natural world has been thought of as a *resource*, it has been exploited without regard for the life that it supports. Social ecology seeks ways to harmonize human and non-human nature, exploring how humans can meet their requirements for life and still live in harmony with their environments.

Ecology teaches us that life is in a constant state of change, as species seek ways to fit in particular environments which are, in turn, being shaped by the diversity of life within and around them. Adaptation is a *process*. Ecology helps develop an awareness of the need to incorporate these organic facts into our most general views of the world—those views that shape the way humans will *be* in the world.

Within human society, the idea of hierarchy has been used to justify social domination, and has been projected onto nature, thereby establishing an attitude of controlling the natural world. The convergence of feminism with ecology is occurring because of an increasing awareness that there are, in fact, no hierarchies in nature. A belief in the virtues of diversity and non-hierarchical organization is shared by both views.

Women have long been associated with nature: metaphorically, as in "Mother Earth," as well as with the naming of hurricanes and other natural disasters! Our language says it all: a "virgin" forest is one awaiting exploitation, as yet untouched by man (sic). In society, too, women have been associated with the physical side of life. Our role has been "closer to nature," our "natural" work centered around human physical requirements: eating, sex, cleaning, the care of children and sick people. We have taken care of day-to-day life so that men have been able to go "out in the world," to create and enact methods of exploiting nature, including other human beings.

Historically, women have had no real power in the outside world, no place in decision-making and intellectual life. Today, however, ecology speaks for the earth, for the "other" in human/environmental relationships; and feminism speaks for the "other" in female/male relations. And ecofeminism, by speaking for *both* the original others, seeks to understand the interconnected roots of all domination, as well as ways to resist and change. The ecofeminist's task is one of developing the ability to take the place of the other, when considering the consequences of possible actions, and ensuring that we do not forget that we are all part of one another.

ECOFEMINISM: ITS VALUES AND DIMENSIONS

Why does patriarchal society want to forget its biological connections with nature? And why does it seek to gain control over life in the form of women, other peoples, or nature? And what, on earth, can we do about dismantling this process of domination? What kind of society could live in harmony with its environment? These questions form the basis of the ecofeminist perspective.

Before the world was mechanized and industrialized, the metaphor that explained self, society and the cosmos was the image of organism. This is not surprising, since most people were connected with the earth in their daily lives, living a subsistence existence. The earth was seen as female. And with two faces: one, the passive, nurturing mother; the other, wild and uncontrollable.

These images served as cultural constraints. The earth was seen to be alive, sensitive: it was considered unethical to do violence toward her. Who could conceive of killing a mother, or digging into her body for gold, or of mutilating her? But, as society began to shift from a subsistence economy to a market economy, as European cities grew and forested areas shrunk, and as the people moved away from the immediate, daily organic relationships which had once been their basis for survival, peoples' cultural values—and thus their stories—had to change. The image of earth as passive and gentle receded. The "wrath and fury" of nature, as woman, was the quality that now

justified the new idea of "power over nature." With the new technology, man (sic) would be able to subdue her.

The organic metaphor that once explained everything was replaced by mechanical images. By the mid-seventeenth century, society had rationalized the separation of itself from nature. With nature "dead" in this view, exploitation was purely a mechanical function and it proceeded apace.

The new images were of controlling and dominating: having power over nature. Where the nurturing image had once been a cultural restraint, the new image of mastery allowed the clearing of forests and the damming and poisoning of rivers. And human culture which, in organic terms, should reflect the wide diversity in nature, has now been reduced to mono-culture, a simplification solely for the benefit of marketing.

Since the subjugation of women and nature is a social construction, not a biologically determined fact, our position of inferiority can be changed. At the same time as we're creating the female as an independent individual, we can be healing the mind/body split.

Life struggles in nature, such as the Stein Valley and the many less-publicized ones, become feminist issues within the ecofeminist perspective. Once we understand the historical connections between women and nature and their subsequent oppression, we cannot help but take a stand on the war against nature. By participating in these environmental standoffs against those who are assuming the right to control the natural world, we are helping to create an awareness of domination at all levels.

Ecofeminism gives women and men common ground. While women may have been associated with nature, they have been socialized to think in the same dualities as men have and we feel just as alienated as do our brothers. The social system isn't good for either of us! Yet, we *are* the social system. We need some common ground from which to be critically self-conscious, to enable us to recognize and affect the deep structure of our relations, with each other and with our environment.

In addition to participating in forms of resistance, such as non-violent civil disobedience in support of environmental issues, we can

also encourage, support, and develop—within our communities—a cultural life which celebrates the many differences in nature, and encourages thought on the consequences of our actions, in all our relations.

Bioregionalism, with its emphasis on distinct regional cultures and identities strongly attached to their natural environments, may well be the kind of framework within which the philosophy of ecofeminism could realize its full potential as part of a practical social movement.

BIOREGIONALISM: AN INTEGRATING IDEA

Bioregionalism means learning to become native to place, fitting ourselves to a particular place, not fitting a place to our pre-determined tastes. It is living within the limits and the gifts provided by a place, creating a way of life that can be passed on to future generations. As Peter Berg and Raymond Dasmann have so eloquently stated, it “involves becoming native to a place through becoming aware of the particular ecological relationships that operate within and around it. It means understanding activities and evolving social behavior that will enrich the life of that place, restore its life-supporting systems, and establish an ecologically and socially sustainable pattern of existence within it. Simply stated it involves becoming fully alive in and with a place. It involves applying for membership in a biotic community and ceasing to be its exploiter.”

Understanding the limitations of political change—revolution—bioregionalists are taking a broader view, considering change in evolutionary terms. Rather than winning or losing, or taking sides, as being the ultimate objective, *process* has come to be seen as key to our survival. *How* we go about making decisions and how we act them out are as important as *what* we are trying to decide or do.

In evolutionary terms, a species' adaptation must be sustainable if the species is to survive. How can humans meet their requirements and live healthy lives? What would an ecologically sustainable human culture be like? It is in dealing with these questions that the

bioregional movement and the philosophy of ecofeminism are very much interconnected.

Human adaptation has to do with culture. What has happened with the rise of civilization, and most recently with the notion of mass culture, is that what could be called bioregionally adapted human groups, *no longer can exist*. It's difficult to imagine how society could be structured other than through centralized institutions that service the many. In our culture almost every city exists beyond its carrying capacity: diverse regions are being exhausted and ecologically devastated.

Becoming native to a place—learning to live in it on a sustainable basis over time—is not just a matter of appropriate technology, home-grown food, or even “reinhabiting” the city. It has very much to do with a shift in morality, in the attitudes and behaviors of human beings. With the help of feminism, women especially have learned an intimate lesson about the way power works. We have painfully seen that it is the same attitude which allows violence toward us that justifies the rape of the earth. Literally, the images are the same. We also know that we are just as capable, generally speaking, of enacting the same kind of behavior.

The ideas of bioregionalism are being practiced all over the world—just rarely referred to as such. The name gives us common ground, however, like ecofeminism. But bioregionalism gives us something to practice and together they could be seen to offer a praxis—that is, a way of living what we're thinking. Here we can begin to develop an effective method of sharing with our male friends the lessons we have learned about power, as well as our hopes and aspirations for an egalitarian society—a society which would be based on the full participation and involvement of women and men in the process of adaptation and thus in the maintenance of healthy ecosystems.

HOMING IN ON A NEW IMAGE

One of the key ideas of bioregionalism is the decentralization of power; moving further and further toward self-governing forms of

social organization. The further we move in this direction, the closer we get to what has traditionally been thought of as "woman's sphere"—that is, home and its close surroundings. Ideally, the bio-regional view values home above all else, because it is here where new values and behaviors are actually created. Here, alternatives can root and flourish and become deeply embedded in our way of being. This is not the same notion of home as the bungalow in the suburbs of western industrialized society! Rather, it is the place where we can learn the values of caring for and nurturing each other and our environments, and of paying attention to immediate human needs and feelings. It is a much broader term, reflecting the reality of human cultural requirements and our need to be sustainably adaptive within our non-human environments. The word ecology, in its very name, points us in this direction: *oikos*, the Greek root of "eco" means home.

The catch is that, in practice, home, with all its attendant roles, will not be anything different from what it has been throughout recent history *without* the enlightened perspective offered by feminism. Women's values, centered around life-giving, must be re-valued, elevated from their once subordinate role. What women know from experience needs recognition and respect. We have had generations of experience in conciliation, dealing with interpersonal conflicts in daily domestic life. We know how to feel for others because we have practiced it.

At the same time, our work—tending to human physical requirements—has been undervalued. What has been considered material and physical has been thought to be "less than" the intellectual, the "outside" (of home) world. Women have been very much affected by this devaluation and this is reflected in our images of ourselves and our attitudes toward our work. Men, too, have been alienated from childcare and all the rest of daily domestic life which has a very nurturing effect on all who participate. Our society has devalued the source of its human-ness.

Home is the theatre of our human ecology, and it is where we can effectively think feelingly. Bioregionalism, essentially, is attempting to rebuild human and natural community. We know that it is non-adaptive to repeat the social organization which left women and

children alone, at home, and men out in the world doing the "important" work. The *real* work is at home. It is not simply a question of fairness or equality, it is because, as a species, we have to actually work things out—just as it is in the so-called natural world—with all our relations. As part of this process, women and nature, indeed *humans* and nature, need a new image, as we mend our relations with each other and with the earth. Such an image will surely reflect what we are learning through the study of ecology, what we are coming to understand through feminism, and what we are experiencing by participating in the bioregional project.