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FROM THE BEGINNING, A FUNDAMENTAL
SHIFT OF PARADIGMS: A THEORY
AND SHORT HISTORY OF
ENVIRONMENTAL LAW

Zygmunt J.B. Plater*

I. INTRODUCTION

Looking back on the past twenty-five years, during which environmental law has developed such astonishing breadth, depth, and volume, I think it possible to sketch out an interesting compound proposition about how environmental law evolved, the primacy of citizen litigation in its development, and what it all may signify.

How is it that environmental law has in short order built such a large body of law, covering so many diverse subjects and infiltrating itself throughout the prior existing legal system, as well as creating new law? I propose that it is because environmental law has been riding a wave of structural change formed by the conjunction of two fundamental paradigm shifts in American society. The proposition has two parts.

First, the basic analytical approach and policy values underlying environmental law came from a fundamental paradigm shift born of Rachel Carson in 1961, perhaps assisted unwittingly by Ronald Coase, redefining the scope of how societal governance decisions should be made.1

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* Professor of Law, Boston College Law School. A fuller version of this Essay and some overall analyses and conclusions drawn from the proposition presented here, can be found in Zygmunt J.B. Plater, Environmental Law as a Mirror of the Future—Tracing the Consequences of a Fundamental Shift of Paradigms, 22 B.C. ENVTL. AFF. L. REV. (forthcoming 1994). I much appreciate the time that my colleagues Rob Abrams, Carolyn Alkire, Harry Bader, John Kelleher, John Morrier, Pat Ratkowski, and Bill Shutkin have given me, good-naturedly putting up with brainstorming sessions and trying to correct the Essay’s most egregious errors. They bear no blame, however, for deficiencies that remain.

1. Rachel Carson’s Silent Spring was arguably the most important single trigger of the environmental great awakening, the scientific treatise that brought ecological consciousness into the American mainstream. See Rachel Carson, Silent Spring (1962). Professor Ronald Coase’s The Problem of Social Cost, although a paean to market ordering, served to popularize recognition of social cost externalizations. See Ronald H. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1 (1960). Welfare economics presumes that individuals are powerfully motivated to externalize costs as much as possible, and cost externalizations have long been the prime targets for environmental law’s accounting process. Id.
What we might call the Rachel Carson Paradigm\(^2\) declared that, although humans naturally try to maximize their own accumulation of benefits and ignore negative effects of their actions, a society that wishes to survive and prosper must identify and take comprehensive account of the real interacting consequences of individual decisions, negative as well as positive, whether the marketplace accounts for them or not. Attempts to achieve such expanded accountings, as much as anything, have been the common thread linking the remarkable range of issues that we call environmental law.

Rachel Carson’s logic is practical, utilitarian advice. Not to heed it, allowing private and public enterprises to act as if they are unconnected islands, where out of sight is out of mind, means that a society risks a short- and long-term shipwreck on the shoals of its own detritus—not just an accumulation of toxics, but also a host of other social costs and unintended consequences.\(^3\)

A second, structural paradigm shift from the mid-1960s has also been critically important to the formation of American environmental law: the shift in the structure of governance from a bipolar, Market/Regulatory Government Paradigm to a multipolar, actively Pluralist Model.\(^4\) Environmental law has been, and had to be, predominantly created and shaped by active citizens, operating from positions outside official private and public governing institutions.

The Rachel Carson Paradigm and environmental consciousness fortuitously hit America at the same moment as this second paradigm shift. If the utilitarian message of the Carson analytical construct was to be

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\(^2\) See infra text accompanying note 66. It alternatively and more awkwardly might be called the Holistic Interconnected-Accounting Paradigm in honor of the First Law of Ecology: Everything is connected to everything else.

Just as others, such as John Muir, had foreshadowed Carson’s ecological arguments, the logic of comprehensive societal accounting was a familiar theme in the work of John Dewey and the pragmatists, as well as an underlying premise of welfare economics.

Indeed, the Rachel Carson Paradigm is obvious, virtually a truism. Truism or not, however, it was generally ignored as a functional societal policy. Carson’s formulation, however, had broad popular and political impact and instantly clicked with a wide range of people who wanted to take action in the field that came to be known as environmentalism. Perhaps the environmental problems she identified were more tangible, directly related to things people saw around them. Perhaps her formulation made coherent critical analysis available to more people and offered more coherent prescriptive corrections. Perhaps it just came at the right time. And insofar as the identification of the Carson Paradigm is itself a truism, it seems to be one that usefuly deserves more attention in ongoing analysis of environmental fact and policy.

\(^3\) Or, in welfare economics terms, unaccounted, externalized costs lead to society-wide suboptimal results.

\(^4\) Looking for a patronymic label, I suppose one could call this the “Thomas Jefferson-Mao Tse-Tung—Let A Hundred Flowers Bloom—Pluralist Paradigm,” but under the circumstances perhaps it is just as well to say the Pluralist Paradigm.
carried into the society's long-term perspective and the structures of government, reorienting the way decisions are made, it was not to be expected that the old bipolar establishments of the status quo would welcome it—nor have they. A diverse array of interests, most of which are "outsiders," had to thrust it into the legal system. More than any other area of the modern legal system, environmental law has developed its complex, extended, doctrinal structure in a process dependent upon confrontational, pluralistic citizen activism, operating in every area of governance, but particularly in judicial and administrative litigation.

Although one should not be oblivious to some caveats—environmental law can be chaotic and wasteful, citizens did not do it all, and so on⁵—this compound analytical and structural proposition helps explain why the field of environmental law has been so energetic, broad-ranging, and often confrontational. It also explains where environmental law may be going.

II. A Diagnostic Example: Section 318(g) of the 1990 Interior Appropriations Act

Here is one recent artifact of environmental law's evolutionary process⁶ that reflects many classic elements of environmental confrontation and provides illustration and analytical grist for the proposition. Section 318(g) of the Department of Interior and Related Agencies Appropriations Act.

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5. To assert citizen primacy runs the risk of ignoring the protracted and sometimes heroic efforts of hundreds of people within the nation's legislatures, administrative agencies, and corporate institutions who undeniably have been extremely important in shaping the substance and character of evolving doctrines of environmental law. But a review of the history of environmental law shows grounds for asserting that without insistent citizen activism, this process of law building would probably never have happened or would have died aborning. The development of environmental law is especially significant for the process by which it has occurred as well as the importance of its subject matter.

A further caveat is that environmentalists have certainly not been consistently triumphant; environmental law is not an exact mirror of their heart-felt desires. Modern public and private law environmental doctrines contain reams of counterweights, balancings, and blunttings of the environmentalists' protective principles and arguments. And "environmentalists," for that matter, are anything but a homogeneous monolith; they include a remarkable biodiversity of individuals and groups.

6. Like several other elements of this Essay, the example that follows is drawn in part from the Author's recently published casebook, Zygmunt J.B. Plater et al., Environmental Law and Policy: A Coursebook on Nature, Law, and Society 572-74, 674-83 (1992) [hereinafter NLS] (addressing Department of Interior and Related Agencies Act, Pub. L. No. 101-121, § 318(g), 103 Stat. 701, 749 (1989) (codified in scattered titles of U.S.C.)). In compiling that book it appeared to us that the only way to make sense of the colossally complex morass that is modern environmental law was to study it as an activist-driven creation, the result of an evolutionary process incorporating the new perspectives of environmental analysis into the entire legal system. Faced with the chronic hesitations of the
tions Act for fiscal 1990, which subsequently appeared in several other annual funding bills, states that

[n]o restraining order or preliminary injunction shall be issued by any court of the United States with respect to any decision to prepare, advertise, offer, award, or operate . . . timber sales in fiscal year 1990 from the thirteen national forests in Oregon and Washington and Bureau of Land Management lands in western Oregon known to contain northern spotted owls. The provisions of section 705 of title 5, United States Code [authorizing courts to stay agency actions], shall not apply to any challenge to such a timber sale: Provided, That the courts shall have authority to [issue permanent injunctions for timber sales found to be] arbitrary, capricious or otherwise not in accordance with law . . . .

What is going on here? This appropriations rider is a legislative axestroke from the pitched battles over the clear-cutting of the last remaining stands of old-growth forests on the federal lands of the Pacific Northwest.

On one side stand the advocates of a massive, final program of clear-cutting—the timber industry and its close ally, the United States Forest

official players in the law-making system, environmental law was built by attorneys and activists using every available nook and cranny of the existing legal process.

This comprehensive, citizen-oriented legal process analysis of environmental law appears to have merit. A recent American Association of Law Schools workshop was launched in recognition of the pervasive legal process reach of the field, noting the extraordinary array of areas in the legal system in which environmental law has recently provided a cutting edge: administrative law, land use and natural resources, bankruptcy, criminal law, law and economics, insurance, local government, real property, torts, civil procedure, civil rights, corporations, constitutional law, ethics, jurisprudence, legal history, remedies, tax, international and comparative law, trusts, land finance, public utilities, poverty law, labor and occupational health, contracts, food and drug law, alternative dispute resolution processes, and more. These issues were discussed at the 1994 American Association of Law Schools Annual Meeting Mini Workshop, entitled Environmental Issues Across the Curriculum, in Orlando, Florida, on January 6, 1994.

7. Pub. L. No. 101-121, 103 Stat. 701, 749 (1989) (codified in scattered titles of U.S.C.) [hereinafter Appropriations Act]. Other provisions of this appropriations rider, no longer on the books, required the agencies to sell off increased annual quotas of timber, id. § 318(a)(1), 103 Stat. at 745, restricted the cutting of certain ecologically significant old-growth forest stands except as necessary to meet the sales quota, id. § 318(b)(2), 103 Stat. at 746, directed the Forest Service to prepare a new spotted owl plan and have it in place by September 30, 1990, id. § 318(b)(6)(B), 103 Stat. at 747, insulated from judicial review Forest Service and Bureau of Land Management decisions shown to be based on outdated information, id. § 318(b)(6)(A), 103 Stat. at 747, and made quasi-judicial findings to reverse two injunctions against timbercutting, id. The latter were held valid in an opinion by Justice Clarence Thomas in Robertson v. Seattle Audubon Society, 112 S. Ct. 1407, 1409 (1992).

Service, the designated federal guardian of these public lands, backed by local congressional delegations. This side represents the center of gravity, money, and power on this issue.

On the other side stand "the environmentalists," a typical, motley collection of citizen volunteers: fishers, college students, aging hippies, retired foresters, ecologists, homemakers, bird watchers and other nature lovers, a few brave and foolhardy employees within the ranks of the industry and the Forest Service (including the remarkably courageous Association of Forest Service Employees for Environmental Ethics (AFSEEE)), other public citizens, and several post-Rachel Carson non-governmental organizations (NGOs) dedicated to environmental advocacy and legal action. This side is largely comprised of volunteers and amateurs with severely limited resources and, at least until recently, little acknowledged legitimacy or hope of success.

Looking at the results of federal timber policy over the years, the citizen environmentalists argued not only that the industry, having eliminated most of the remaining virgin stands of Northwest forest in private hands, was on the verge of finishing off the precious last and most fragile of the public's old-growth forests, but also that in societal terms it made neither ecological nor economic sense to do so.

Clear-cutting devastates forests, forever destroying the stable and rich biodiversity that they have developed over eons. It can have devastating direct and indirect economic consequences as well.

After a forested slope is clear-cut, the surface soils and lumbering detritus wash downgrade, where transient debris dams create flash-flooding dangers, and sediments choke the streams. Clear-cut sedimentation

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9. Among the citizen organizations that mounted the old-growth ancient forests protection campaign were the national and local Audubon societies, Trout Unlimited, the Oregon Natural Resources Council, the University of Oregon Northwest Environmental Clinic, Lou Gold and the Siskiyou Regional Education Project, the Project Lighthawk Environmental Airforce, the Association of Forest Service Employees for Environmental Ethics, the Headwaters advocacy group, the Pacific Rivers Council, the Native Forests Council, the Sierra Club Legal Defense Fund, and the Earth Island Institute.

10. I am assuming, not-so-arguendo, the basic sense of the environmentalists' arguments. Clear-cutting involves the elimination of virtually all trees and shrub vegetation in a forest, with piles of unwanted leftover "slash" burned off to prepare the way for a tree-farming, "even-age," single-species monoculture. The previous ecological equilibrium of the forest ends, with the variety of natural animal and plant species dropping from hundreds per acre to mere tens or less. The erosion, water temperature, and water budget consequences of the clear-cutting are felt far from the site. The regrown tree farms are less useful for public use, more susceptible to disease, and despite the public relations claims of the past 40 years, apparently are insufficiently fertile to provide a sustainable timber resource. See 5 RICHARD RICE, THE WILDERNESS SOCY, NATIONAL FORESTS: POLICIES FOR THE FUTURE, THE UNCOUNTED COSTS OF LOGGING (1989).
and debris runoff has been a major cause of recent precipitous declines in the Pacific salmon fisheries by smothering or scouring fish-spawning habitat, and have reduced reservoir storage capacity and hydroelectric generation. These costs are hard to quantify, but are real nevertheless.\textsuperscript{11} Job statistics provide a rough cross-industry comparison of relative impacts: The stressed Pacific Northwest fisheries in 1991 still provided jobs for approximately 6000 fishers—drastically diminished from the years before extensive logging and dam building—half again as many as in the clear-cutting workforce in the same region at the same time.\textsuperscript{12}

Then there is the economic fact that federal taxpayers massively subsidize this dysfunctional program. Federal taxpayers subsidize the timber industry in four major ways. The Forest Service (in ascending order)

(1) sells timber from national forests below regular market price;\textsuperscript{13}

\textsuperscript{11} E.g., Michael Stewart, \textit{A Chain Saw Massacre in Our Forests}, CHI. TRIB., June 20, 1992, at C21. There is general agreement in the salmon industry that the drastic fall in the salmon catch in the Pacific Northwest—less than half of that caught just three years ago—has been caused by the combination of clear-cutting and continued burdens on migration routes by federal dams. The south fork of the Salmon River used to be the most important steelhead and salmon stream in Idaho until it was wiped out by a U.S. Forest Service-sponsored clear-cut. The cash value of the timber was estimated at about $14 million; the state and federal governments subsequently estimated the value of the lost salmonids in terms of economic return at $100 million. FLY ROD & REEL MAG., Jan.-Feb. 1990, at 19.


Total steelhead, salmon, and char economic revenues in the Pacific Northwest, excluding Alaska, in the late 1980s totalled approximately $1.25 billion annually. The industry as a whole supports 62,750 jobs. This fishery is currently about one-tenth its historic size. PACIFIC RIVERS COUNCIL, INC., \textit{RESEARCH REP. NO. V, THE ECONOMIC IMPERATIVE OF PROTECTING RIVERINE HABITAT IN THE PACIFIC NORTHWEST} (1992). The total value of the commercial salmonid harvest each year in the 1980s was approximately $233 million. \textit{Id.} at 7.

(2) spends several hundred million dollars per year building and maintaining logging roads in rugged terrain—to date the Forest Service has built seven times more road mileage than the entire interstate highway system—and providing other free services to the industry. In many cases the timber itself is sold below the government’s own out-of-pocket cash-flow costs. From 1979 to 1991 the Forest Service sold 124 billion board feet at a loss of $3.5 billion; 14

(3) pays twenty-five percent of gross timber receipts as grants to local communities in lieu of property taxes; 15 and (4) as noted above, fails to account for the largest subsidy of all: ecological costs, including the loss of salmon runs, the permanent sacrifice of thousands of acres of diverse natural forests, often on fragile, high-elevation, steep slopes that otherwise would be available for multiple, nonlogging public uses, as well as ethical and aesthetic concerns. 16

In other words the environmental position in the old-growth clear-cutting controversy, as in so many environmental battles, is that if you do a rational overall economic and ecological analysis weighing the program’s real benefits 17 against all the real costs, in light of available alternatives, 18 the net rational decision for society is to do it differently: End the subsidized old-growth clear-cutting. This is a conclusion supported by hardheaded economists outside the industry and the Forest Service, as

14. If interest is figured in, this is a net loss of $6.3 billion. In addition to providing logging roads, the Forest Service also surveys and inventories timberlands, provides fire protection, staff personnel and structures, creates maps, and controls disease. Under cost-accounting analysis most of the 122 national forests have never earned a penny on timber, and in 1990 only 15 showed a cash-flow profit. Wolf, supra note 13, at 1074-75; Perri Knize, The Mismanagement of the National Forests, ATLANTIC MONTHLY, Oct. 1991, at 98, 101, 103; BELOW-COST TIMBER SALES TASK FORCE, SOCIETY OF AM. FORESTERS, A QUESTION OF VALUES: BELOW-COST TIMBER SALES ON THE NATIONAL FORESTS (1988) (arguing that recreational benefits of logging roads and similar positive effects justify below-cost timber sales).

15. In 1990 this amounted to $327 million. The theory of these payments is that the federal government ought to contribute because it is exempt from state and local property taxation. The Forest Service does not reckon these and many other public costs against revenues in figuring net revenues. Knize, supra note 14, at 103.


17. Examples of such alternatives include logging profits, continuation of some logging jobs, and local logging settlements’ way of life at least over the short term.

18. These include elimination of subsidies, disincentives against exports of unprocessed logs, selective cutting, long-term sustainable management, and retraining for loggers.
well as authoritative international resource analysts, and would seem at least to have deserved some serious consideration in the public forum.

Without environmental litigation, however, there would have been virtually no effective public debate. The official players in the timber arena, both governmental and corporate, had no interest in acknowledging the clear-cutting program's negative consequences or making a realistic overall economic, much less ecological, assessment of the program.

The "Iron Triangle" formed by the regulated industry, its regulators in the bureaucracy, and the local congressional delegation, had been molded into a powerful onrolling status quo, each enjoying its own intricate system of rewards that flowed from maintaining clear-cutting policies without acknowledging costs to the public and the national legacy. The industry gets its free roads and below-cost public timber. The Forest Service gets its "stumpage" measure of production to show performance of its politically perceived mission and the political cachet that goes with it, and some federal officials will eventually take the revolving door into a second career in the timber industry. The industry's congressional spokespersons get the strategic rewards of satisfying large local economic interests and campaign contributors. In the economic terms of rational individual maximization of self-interest, each found it advantageous to ignore the diffuse social costs of the clear-cutting regime. Because public forests cost nothing to create—and ecosystem damages are hard to account for because they are extremely diffuse, partly aesthetic, and gener-


20. Why did environmental regulatory agencies like the state and federal fish and wildlife services fail to intervene to force consideration of the destructive effects of clear-cutting? To observers of environmental politics, that is a naive question because protective agencies have so long been politically outgunned, suborned, repressed, or co-opted by the resource-exploitation establishment, which includes rival sister agencies as well as industry and its legislative allies. See, e.g., NLS, supra note 6, at 608 (noting that state and federal conservation agencies are willing but unable to protect watersheds being channelized by United States Soil Conservation Service).

21. The term "Iron Triangle" appears to have been used originally by Professor Bruce Hannon at the University of Illinois and the Coalition for American Rivers in the late 1960s in efforts to resist the water resources pork barrel. The term has useful descriptive application in a wide variety of agency-industry settings. The blocs depicted in the old-growth clear-cutting controversy are replicated in the grazing, mining, and agricultural subsidy arenas and roughly paralleled in the pollution control wars.

Somewhat confusingly, of course, under the rubric being used here, the bipolar paradigm often leads to Iron Triangles. Go figure.
ally difficult to quantify\textsuperscript{22}—the official players could safely externalize these costs while internalizing their own slices of the economic and political profits. In our present system no official entity has the fail-safe operational task of making sure that agencies comply with laws and that governmental programs make overall sense.

The citizens who spoke for the trees, the ecosystem, and the overall social-cost accounting initially could find no place in the public policy forum. Citizen environmentalists had no expertise, it was argued; this was a field for professionals. If they did find professionals willing to speak for the overview, these voices would be dismissed as disgruntled mavericks. In other cases the environmentalists have been straightforwardly excluded as gratuitous self-appointed interlopers, with no official stake in the matter. In the press as well as the corridors of power, environmentalists are often treated as marginal gadflies, at least until they get an injunction.

Since a straightforward public debate on federal clear-cutting programs was not possible, the public-interest citizens could either go home or go to court. As in so many other tough issues, they chose the latter with all its burdens.

In a lineup of legal claims that reflects the heritage and battle plan of a typical environmental law campaign,\textsuperscript{23} the citizens filed lawsuits against the clear-cutting program alleging violations of a variety of statutes that consciously or unwittingly incorporated Carson-style accountings: Forest Service timber sales were alleged to be in violation of the National Environmental Policy Act of 1969 (NEPA),\textsuperscript{24} which requires federal agencies to do some comprehensive looking before leaping; the National Forest Management Act of 1976,\textsuperscript{25} which is supposed to require

\textsuperscript{22} A fundamental problem in many environmental cases is that there is no ready market in the legacy value of resources or quality of life. Environmental law is again pioneering innovative methods of resource accounting to cure this deficit. See NLS, supra note 6, at 56-57, 166-68. But even where cash dollar values are available to demonstrate the overall economic preferability of the environmental position, official decision makers, who after all live in their own internalized benefit-cost contexts, still regularly go against optimal social choices. See Zygmunt J.B. Plater, In the Wake of the Snail Darter: An Environmental Law Paradigm and Its Consequences, 19 U. Mich. J.L. Reform 805, 814-18 (1986) (noting that pork-barrel regulators overrode unanimous cabinet-level economic verdict that contended project was worth far less than river valley and ecosystem it would destroy).

\textsuperscript{23} Unlike many major environmental law cases, however, the old-growth forest cases do not appear to have included nonstatutory causes of action. In many other cases, like the Exxon Valdez oil spill, the common law has continued to provide a sophisticated, flexible, practical environmental litigation platform.


effective overall official planning, taking account of a broad swath of public concerns in the public forests; the Federal Oregon and California Railroad Land Grant Act; the Migratory Bird Treaty Act; the Federal Land Policy and Management Act of 1976 (FLPMA); the Endangered Species Act of 1973 (ESA); and others. None of these legal vehicles required an overall rational public cost-benefit analysis of the clear-cutting program. To varying degrees, however, each offered some purchase on the problem, especially after the not-coincidental discovery that the ecological qualities of the last old-growth forests were intimately linked to the fate of the endangered Northern spotted owl, Strix occidentalis caurina.

Most of these statutes incorporated some elements of the Carson Paradigm’s expanded accounting perspective. They also owed their existence to the pluralism of outsider citizens. Some had key provisions drafted by citizens. All had been made into effective law, not by official


Different statutes aim at different stages of the administrative process. The Endangered Species Act, for instance, too often comes inefficiently late in the game, at the end of project planning. Secretary Bruce Babbitt has emphasized that the better long-term strategy is foresight planning to avoid endangerment in the first place. Habitat loss is a primary cause of endangerment, so land-based economic controversies will predictably continue.
31. There is not, and probably never will be, a Federal Prevention of Destructive Subsidized Giveaways Act.
32. It is not coincidental that many endangered species exist as vivid ecological indicators—canaries in the coal mines—of places and resources that are endangered and valuable to humans as well. The leading cause of endangerment is habitat destruction, and when a highly specialized species no longer has sufficient places to live and breed, that means such places are being lost to humans as well. The important timber cases are chronicled in Victor M. Sher, Travels with Strix: The Spotted Owl’s Journey through the Federal Courts, 14 PUB. LAND L. REV. 41 (1993).
33. The only teeth in NEPA, the environmental impact statement requirements, derived from Professor Lynton Caldwell’s draft language; § 7 of the Endangered Species Act apparently was drafted by Tom Garrett, then at Friends of the Earth, and Frank Potter. The FLPMA was forged from extensive public participation in the Public Lands Review Commission hearings.
governmental implementation but rather by relentless and sophisticated citizen litigation in courts and agency proceedings.34

It was not until the citizens had won preliminary injunctions in several of these cases that the official players and the press began to take them seriously as participants in the public policy debate. For the press, our governing information system,\textsuperscript{35} injunctions were news that legitimized coverage of the environmentalist combatants' side of the story. As for the official players, they were stung—not into compliance but into extensive counterattacks. The citizens who were proving that federal conservation statutes were being violated were branded as dangerous radicals, attacking the American system. The defendants attempted to get the environmentalists' attorneys disbarred, to have the environmental law clinic that had brought several cases disbanded, and to have the law professors supervising student efforts censured by their university. Employees within the Forest Service and the industry were fired, demoted, transferred, or suffered similar reprisals for failing to tailor data to fit official needs, and internal sources of leaked information were energetically pursued.\textsuperscript{36} The so-called Wise Use movement, another in a series of industry-spawned "public interest" organizations,\textsuperscript{37} produced vituperative media attacks on the owl and old-growth forest advocates.\textsuperscript{38} Each

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\textsuperscript{34} See infra notes 78-89 and accompanying text.
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\textsuperscript{35} Day in and day out it seems to many participants in national policy debates that it is not what government actually knows, but what the press perceives and transmits to the public that shapes government policy. In the snail darter-Tellico dam battle, the Secretary of Interior himself conveyed the God Committee's unanimous economic findings against the dam to every member of Congress. See Plater, supra note 22, at 813-14. Because the press frustratingly failed to carry that part of the story, Congress ultimately felt free to ignore the merits and roll the pork barrel, and Jimmy Carter, piteously apologizing, decided he could not counter the ridicule attached to the press's version of the fish story. Id. at 814 \& n.33.
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\textsuperscript{36} AFSEEE has noted numerous examples of Forest Service employees, particularly biologists, who got in trouble trying to do their jobs accurately while resisting the timber-oriented pressures within the agency hierarchy. Telephone Interview with Jeff DeBonis, Founder, AFSEEE (Feb. 24, 1994) [hereinafter DeBonis Interview]. Internal agency reports that demonstrated the validity of the citizen enforcers' complaints were lost in the bureaucracy and only mysteriously made available to the citizens. See, e.g., Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081 (W.D. Wash. 1991).
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\textsuperscript{38} The Wise Users argue that the citizens in the forest controversy are "out in left field[,] ... the biggest hypocrites in the world. . . , making us a nation of naysayers." Julie Bailey, Logger: Regain Control of Resources, Lewiston Morning Trib., Oct. 25, 1991, at A1. The Wise Use movement, cribbing its conservation label from Gifford Pinchot, who would not appreciate the appropriation, represents the positions of subsidized industries and other interests chafing under changing public consciousness of resource issues. Its well-financed campaigns have attracted much ink, even though its message is self-serving and eschews analysis on the merits, preferring to characterize environmentalists as analogs to Nazis and the like. See, e.g., Charles P. Alexander, Gunning for the Greens, TIME, Feb. 3, 1992, at 50.
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citizen lawsuit was carried into continuing cycles of judicial appeals and remands. These were not unusual reactions. The only classic antienvironmental tactic missing from the old-growth story was a defensive SLAPP suit—a “strategic lawsuit against public participation” countersuit seeking defamation damages and enjoining environmental enforcement.39

And the timber industry’s congressional representatives added section 318(g) to the 1989 appropriations bill.

Now let’s consider section 318(g) on its terms. Leaving aside the question of the appropriations bill vehicle,40 as a matter of its legal function, section 318(g) is designed to prevent federal courts from granting preliminary equitable relief in challenges against the most contested timber sales, which happen to involve the spotted owl. By the time a court is able to hold a permanent injunction hearing, it appears, the issue would be moot.41

But what is the provision’s unspoken premise? Clearly its sponsors wanted clear-cutting of public old-growth forests to continue unquestioned and unabated. Clearly they would have liked to override the conservation statutes that provide the forest advocates’ legal ammunition, but did not have the votes to do so.

The timber lobbyists and their congressional spokespersons realized, however, that they did not have to repeal the statutes in order to nullify the existing protective laws. All they had to do was block citizen enforcement actions.42

Note the implicit premise, undoubtedly understood by all who worked on the bill: Why would the timber lobbyists gain their objective

39. See NLS, supra note 6, at 121. Several SLAPP-like lawsuits were, however, filed for interference with business profits owing to citizen demonstrations at clear-cutting sites. DeBonis Interview, supra note 36.

40. Appropriations bills are theoretically prohibited from overriding substantive law, see H.R. Doc. No. 279, 99th Cong., 2d Sess. §§ 608-627 (1987); S. Doc. No. 1, 100th Cong., 1st Sess. §§ 14-16 (1988), because of fears that bills in the appropriations process, the home of the pork barrel, can circumvent substantive legislative committees and substantive criticism. Courts typically construe appropriations riders narrowly. See Neal E. Devins, Regulation of Government Agencies through Limitation Riders, 1987 DUKE L.J. 456. But if Congress violates its own rules by expressly passing a substantive rider on an appropriations bill, it will be given effect. See Plater, supra note 22, at 843-44.

41. At the very least, litigating under shadow of the axe while timber program operations continue is a shaky process.

42. Citizen plaintiffs are virtually the only people who use the courts to enforce federal forest laws. This is taken for granted, but is interesting on its own terms. Decisions reporting agency judicial enforcement actions are hard to find, which indicates either that the industry feels it lacks the ability to object successfully against administrative enforcement or, more likely, that it rarely has reason to object to administrative enforcement.
if citizen suits were stymied? Because once citizen enforcement was removed, the industry and the Forest Service would be free to violate the laws passed to regulate them, and would matter-of-fact continue doing so. The purpose of section 318(g) was to allow both the industry and its federal regulators to ignore the conservation laws. The modern administrative state's only credible mechanism for seeing that these federal statutes were obeyed was public-interest litigation brought by citizen volunteers.

Ultimately, the barrage of environmental lawsuits against clear-cutting old-growth forests, although not stopping the clear-cutting, has slowed it, and has brought the timber issue to the level of open national policy debate. There has been extensive coverage from the national media, growing public awareness of some of the subtleties of the issue, pointed congressional debates questioning the rationality of the subsidy program, and a freshman President dragooned to the Pacific Northwest to attempt a Timber Summit resolution of the matter. The statutory exemption carried by section 318 has been removed from the books, in part due to a petition to Congress signed by 458 law school deans and faculty members protesting the provision. New forest resource legislation is likely to follow up on the lessons of the spotted owl. Jack Ward

43. This is not the only example of an appropriations provision designed to advance a special interest through encouragement of lawbreaking. See WALTER GELLHORN ET AL., ADMINISTRATIVE LAW 105 (7th ed. 1979) (noting Border Patrol budget cuts to encourage illegal immigrant labor for Southwestern agriculture and cuts in labor inspector funding to weaken Fair Labor Standards Act of 1938, 29 U.S.C. §§ 201-219 (1993)).

44. That the rationale was not the avoidance of meritless litigation is indicated by the fact that even in a field so subject to judicial deference to agency authority, there have been substantial numbers of injunctions issued in these citizen actions.

45. The Timber Summit, or Forest Conference as it was renamed, took place in Portland, Oregon, on April 2, 1993. See Sher, supra note 32; Victor M. Sher, Key Results from Forest Conference, CHRISTIAN SCI. MONITOR, Apr. 16, 1993, at 18; see also U.S. FOREST SERV. & BUREAU OF LIVESTOCK AND MINING, DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON HABITAT FOR LATE SUCCESSIONAL AND OLD-GROWTH FOREST RELATED SPECIES WITHIN THE RANGE OF THE NORTHERN SPOTTED OWL (1993) (providing historical narrative of clear-cutting program and spotted owl).

The recently announced Clinton Administration compromise restricting old-growth logging to 693,000 acres of the total remaining 4.8 million unprotected acres of federal old-growth forest does not please environmentalists, who had called for a complete cessation of the program. It does, however, accept their fundamental premise that the program is destructive and requires curtailment. See Timothy Egan, Tight Logging Limit Set in Northwest, N.Y. TIMES, Feb. 24, 1994, at A10.


47. Congress has already overturned some old timber shibboleths, including the sweetheart long-term slash-and-burn timber contracts of the Tongass National Forest. Tongass
Thomas, the new head of the Forest Service, has issued a reformist message to his staff in the field and in Washington that begins, "We will: (1) Obey the law . . . [and] (2) [t]ell the truth." Whatever comes of it all, can anyone seriously believe that this important national public policy debate would ever have happened without citizen environmental litigation?

And the history of the old-growth clear-cutting battles illustrates how environmental law has become a metaphor for fundamental changes in the way American society makes its decisions.

III. AMERICA BEFORE ENVIRONMENTAL LAW

It is not that there was no environmental law for the first 175 years of the Republic, but rather that it was quite marginal, and citizens played little organized part in its formation. What we now would identify as environmental law lay in the interstices of the common law, principally in the law of neighbors, in occasional regulatory provisions of local health codes, or in statutes of the polite conservation variety. And it did not yet have a name.

Under common law some cases that now would be called environmental were brought to court and successfully achieved remedies for pollution harms. Common law, however, created no consistent body of case law recognizing the broad legitimacy of environmental protection, and it often bowed matter-of-factly to the national mission of industrialization.


48. Memorandum from Jack Ward Thomas, Chief, U.S. Forest Service, to Deputy Chiefs, National Foresters, Station Directors, Area Director, and TITF Director (Dec. 9, 1993) (on file with author). He stated, "We will:

Obey the law.
Tell the truth.
Implement ecosystem management.
Develop new knowledge, synthesize research and apply it to management of natural resources.
Build a Forest Service organization for the 21st century.
Trust and make full use of our hard-working, expert workforce."

49. See Whalen v. Union Bag & Paper Co., 101 N.E. 805 (N.Y. 1913) (holding pollution of stream justified shutting down paper factory to protect farmer's water supply); Wilcox v. Henry, 77 P. 1055 (Wash. 1904) (granting public nuisance injunction against rendering plant smells).

In the years before the 1960s, the dominant players in American governance were the marketplace and the government agencies that had been delegated the function of market oversight. The economic marketplace has arguably always been the most powerful "government" of American life, the true driving force of the Revolution that cut us off from colonial rule and set us on our manifest destiny march of conquest across the continent. Government did not readily leap to assume the role of vigilant counterweight to the excesses of the marketplace.

In public law, with minor exceptions, early enactments in the natural resources field typically reflected the economic manifest destiny principle. State and federal homestead, mining, and other resource exploitation acts focused on getting the resource base into the economy, with virtually no conservation standards. Even after the geographical frontier was no more, the frontier ethic of enterprise and exploitation, ignoring the consequences or moving on—a systemic externalization of costs—continued to be reflected in positive law.

The "unipolar" power structure, and the extreme laissez-faire paradigm of public government that served it, however, shifted in the late nineteenth and early twentieth centuries to a more actively "bipolar" model. Faced with trusts and corporations unknown to the Framers, government agencies were occasionally given limited mandates to control some of the most obvious excesses of unrestrained market power.

In the environmental field the Forest Service, which was launched at the turn of the century, was one of very few public regulatory agencies designed to be an active protector of the nation's natural heritage. Even in the New Deal's proliferation of agencies, in which the regulators in the bipolar paradigm for a time actually took on very active planning and development seems to have led many courts to adopt a general balance-of-utility defense so that polluting defendants were virtually immune from tort prosecution. See NLS, supra note 6, at 114-15, 134-36.

51. See, e.g., Arnold v. Mundy, 6 N.J.L. 1, 93-94 (1821) (holding right of public to fish in stream notwithstanding objection by riparian owner).


54. The Interstate Commerce Commission (ICC) was the first major federal regulatory agency launched in 1897 by populist fervors but with powers that soon were co-opted by the industry it regulated. See NLS, supra note 6, at 537-38.

55. See United States v. Grimaud, 220 U.S. 506, 522 (1911) (upholding Secretary of Agriculture's authority to restrict grazing on national forest lands).
managerial roles, very few conservation regulations were passed. The most successful area of environmental initiatives before the mid-twentieth century was undoubtedly the preservationist-conservationist ethic of Teddy Roosevelt, Gifford Pinchot, and other silk-stocking mavericks. Their movement, however, did not define or address environmental threats broadly. National parks legislation, grand though it was, focused on isolated niches of the American landscape, not on regulatory objectives.

Legislating public interest counterweights to marketplace power and actually accomplishing a functioning balance between private and public policy, moreover, turned out to be two very different propositions. Although several regulation-oriented statutes were passed, they generally amounted to very little in either the natural resource or pollution control areas. Agencies like the Forest Service and the Grazing Service quickly fell prey to the classic double-pronged counterattacking tactics of the marketplace—strident resistance and seduction. Soon the powers and perspectives of the industry they regulated effectively captured them. In the fields of air and water pollution control, a variety of statutory systems appeared at both the federal and state level, but the same market

56. For example, the Soil Conservation Service that tamed the Dust Bowl did so primarily through education and grants rather than regulation. See 16 U.S.C. §§ 590a to 590q-3 (1988).
57. The national park system, clearly a pioneering concept in resource protection, was proprietary rather than regulatory and generally avoided treading too directly on market interests. Roosevelt and Pinchot epitomized the noblesse oblige Brahmin class and were far from pluralist democratic antiestablishmentarians. William O. Douglas, on the other hand, who stood within the current of the conservation movement, targeted his interests and systemic criticisms more broadly, including issues of pollution and urban quality of life.
58. The Taylor Grazing Act of 1934 was another early attempt to restrict resource derogation, designed to address the obvious destructive consequences of overgrazing on public lands. 43 U.S.C. §§ 315-316o (1988).
59. In 1892 the Attorney General under President Cleveland wrote to the president of a railroad in response to the latter's plea for abolition of the ICC: "'The part of wisdom is not to destroy the Commission, but to utilize it.'" Louis L. Jaffe, The Effective Limits of the Administrative Process: A Reevaluation, 67 HARV. L. REV. 1105, 1109 n.7 (1954) (quoting Richard Olney).
60. See George Cameron Coggins & Margaret Lindeberg-Johnson, The Law of Public Rangeland Management II: The Commons and the Taylor Act, 13 ENVTL. L. 1, 11 (1982). The U.S. Grazing Service along with the General Land Office became the Bureau of Land Management (BLM) in 1946, but the capture phenomenon continued, as shown by the BLM's chronic jest name, Bureau of Livestock and Mining.

"We don't want to be a regulatory agency. We want to be a development agency on our national lands," said former Secretary of Interior Manuel Lujan in a speech to coal industry executives and a press conference thereafter, explaining why his department would continue to refrain from strict enforcement of strip-mining regulations. Keith Schneider, U.S. Mine Inspectors Charge Interference by Agency Director, N.Y. TIMES, Nov. 22, 1992, at A1.
pressures sharply restricted the potential and practicability of their regulatory stringency.\textsuperscript{61}

The putative bipolar structure of societal governance, with official governmental watchdogs guarding against market excesses, in practice often evolved into a unipolar, laissez-faire love-nest, as the marketplace co-opted the guardians. The legal profession did its part, developing an expansive body of administrative law on behalf of industry, designed to constrain and cut back the generally highhanded and much-resented potency of New Deal agencies. In 1946 the Administrative Procedures Act (APA)\textsuperscript{62} was pushed through Congress, saddling agencies with required minimum standards of process to be given to regulated parties and providing for generous judicial review.

By 1955 the erstwhile opposing counterweights of the marketplace and government had moved sufficiently close together that Henry Fairlie could realistically dub them "the Establishment,"\textsuperscript{63} a sociopolitical mechanism run by the official players, private and public, with no room in the system for citizens.

In the environmental area the premise of private enterprise, generally seconded by the governmental regulators, was that maximizing direct economic net benefits to business was an unambiguous societal good, with only the most egregious negative consequences and by-products deserving official attention as exceptions to the general rule. Environmental quality as well as other social costs were presumptive sacrificial trade-offs. Needless to say, citizens were not welcomed as active players in the environmental policy arena. The ongoing social balance was negotiated within the two official blocs, government and industry. Concerns about

\textsuperscript{61} See NLS, \textit{supra} note 6, at 722, 764-66, 827-28.

\textsuperscript{62} Ch. 324, §§ 1-12, 60 Stat. 237 (1946) (codified as amended in scattered sections of 5 U.S.C. §§ 551-576 (1988)). Today, reflecting the contemporary reality of the regulator-regulated industry alliance, Justice Rehnquist has been able to read APA history upside down as setting maximum procedural requirements when citizens attempt to win improved procedures in court. See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978) (holding that APA established maximum procedural requirements Congress was willing to have courts impose on federal agencies in rule-making proceedings, not just minimum procedures as previously thought).

\textsuperscript{63} Henry Fairlie may have borrowed the term from a predecessor, but it was he who popularized it. \textit{See Henry Fairlie: Tribute to the Late Journalist}, \textit{New Republic}, Mar. 26, 1990, at 6 (citing Henry Fairlie, \textit{The Spectator}, (London, Sept. 23, 1955)). The phrase took on some connotations of stridency in the post-1960s but clearly has useful denotative power. Iron Triangles, I suppose, are more specific descriptive subsets of the Establishment.
the natural environment were better left to the professional managers in the field, corporate and governmental—even Aldo Leopold thought so.\(^\text{64}\)

IV. THE REVOLUTION OF THE 1960s

Well, actually, in retrospect the 1960s did not totally end the patterns of the past and usher in the Age of Aquarius. The 1960s did, however, bring several remarkable and fundamental changes in theories of social governance that have ultimately been reflected in the legal system, most notably in environmental law.

In effect Rachel Carson spread a broad intellectual catch-basket beneath the Coasian welfare economists' universe of benefit-maximizing individual actors, so as to collect and take overall account of their jetisoned "externalized" social costs, even if they are indirect and unmarketized.\(^\text{65}\)

Economics literature and Ronald Coase's 1960 article have clarified some important elements of human behavior generally, including the nature of humans in economic enterprises and in government agencies.\(^\text{66}\) The fundamental perception was that all individual decision makers will attempt to maximize the amount of benefits they can internalize to themselves, by externalizing the maximum related and consequential costs onto others who will not be able to hold them accountable. Optimistically, like many economists, Coase thought that externalities could be marketized and privately ordered, so that the marketplace would nevertheless achieve overall optimal choices without requiring the artifices of governmental control.\(^\text{67}\) His description of the problem, however, has been more useful than his optimistic solution. Private profit-seeking

\(^\text{64}\) Although Leopold's *A Sand County Almanac* was a lyric scientific expansion of John Muir's early twentieth-century natural ethics, Leopold was very much a professional resource manager, generally aiming his writings at his colleagues rather than the public at large.

\(^\text{65}\) There is no such word as "unmarketized," but it is a useful term for denoting consequences that do not traditionally or conveniently have a monetary or political market value, but which nevertheless have societal importance.

\(^\text{66}\) See Coase, *supra* note 1, at 3-5, 42-44. The human-nature calculus described by economists for individuals in the marketplace also describes the individual calculus of agency decision makers: A public official deciding whether to dream up a massive public works project to dam a river, drain a wetland, or build a hundred miles of lumber roads into wilderness does not have to pay for the resources. They are already owned by government or can be paid for with taxpayer dollars, which likewise are effectively free to the Iron Triangle. Losses of natural values are traditionally costless. Agencies feel internal benefits in terms of power—political heft and ability to spend budgets—and their institutional momentum. Zygmunt J.B. Plater, *Reflected in a River: Agency Accountability and the TVA Tellico Dam Case*, 49 TENV. L. REV. 747, 754-55 (1982).

\(^\text{67}\) This requires heroic assumptions about measurability of consequences, as well as perfect information, no transaction costs, and no disparate access to markets or disparate re-
mechanisms are so powerful, the receiving commons so diffuse and hard to monitor, and the brokerage system required to trade in social costs so difficult to conceive, that the old bipolar players have been largely able to continue their business as usual. Social costs continue to be generated and accumulate in clouds of vastly troublesome externalizations. Private corporate decision makers and public agency officials still often operate as if in an insulated sphere, ignoring the detritus and accumulated interacting consequences of their actions.


Carson taught that this is not all that happens. There is no such thing as a simple, one-shot technology; everything has continuing long-term consequences. Pesticides do not just kill target bugs, they kill many of their ecological neighbors as well, eliminating the rich, stable equilibrium that had naturally evolved to give the land its fertility in the first place.68 Pesticides do not just disappear after they have killed the target bugs. They linger on and on, blowing in the wind, leaching into groundwater, moving up through ecological food chains. The lessons Carson drew from DDT pesticides, moreover, readily applied themselves to many other settings as well—not only to other kinds of pollution, but also to resource management issues like timber and grazing, to highway and transportation planning, pharmaceuticals and health technology, and by extension to many other areas of national policy.69 Although humans may not take account of the true social and ecological costs of their actions, nature keeps a comprehensive tab, and real consequences follow.70

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68. See CARSON, supra note 1, at 54-57, 61. It is remarkable in retrospect how books written by three women at virtually the same historical moment so powerfully reshaped so much of modern American society's view of life: RACHEL CARSON, SILENT SPRING (1962); JANE JACOB, THE DEATH AND LIFE OF GREAT AMERICAN CITIES (1961); and BETTY FRIEDAN, THE FEMININE MYSTIQUE (1963).

69. Without casting the proposition so universally as to be meaningless, the crux of Carson's logical reminder of the need to account comprehensively for consequences direct and indirect, positive and negative, obviously holds logical significance for current debates about industrial policy, immigration, welfare, and indeed virtually all human decision making.

70. When there is uncertainty about the scale of consequences, ecology also teaches the precautionary principle—that we should disrupt as little as possible the long-evolved diversity and equilibrium we inherited.
Rachel Carson’s paradigm also changed the scope and hierarchy of the perceptual landscape we apply to human actions. King Canute notwithstanding, Western societies have traditionally tended to view human actors as the central players in the life of the planet, with nature as a subservient and pliant backdrop. Carson showed through the ecological realm that the backdrop to human activity may be far larger in scale and importance than the humans pirouetting in the foreground. Nature has developed a richly diverse and interacting natural equilibrium, communities of communities spread around the planet providing services previously unrecognized, fulfilling important productive functions previously taken for granted, capable of causing broadly destructive systemic consequences when they are jostled out of balance.

From this perspective an important utilitarian precautionary principle asserted itself: Unless you are pretty sure that the background foundational equilibria will not be disrupted, or that the negative consequences will be foreseeable, minor, and mitigatable, you had better be sure that what you propose to do is worth the potential costs; it is safer not to risk casually the escalating domino consequences that may follow. In this regard Carson showed that moving from a human-centered, master-of-nature perspective to the holistic, human-species-as-constituent-part-of-nature view is not just an ethical idea, it is fundamentally practical and utilitarian as well.

Silent Spring, an essentially scientific disquisition, found a remarkably broad, energetic, and engaged public audience. In the 1960s citizens had suddenly begun to discover themselves, thanks to the civil rights

71. See NLS, supra note 6, at 12-13.
72. A homely example is Carson’s discussion of the crucial role of diverse soil bacteria and earthworms in creating and maintaining soil fertility. Once the soil is poisoned by pesticides over vast areas, exterminating or drastically reducing these ecological chains, humans must try to replicate the natural pest-control and nutrient-investment cycles. To do this artificially, it turns out, is expensive and not very successful. See CARSON, supra note 1, at 55-56, 107-08, 253-55.

Another vivid extension of Carson’s bacteria and earthworm analysis is the human urge to dam flowing water. The Aswan Dam and others like it are huge, dramatic edifices ultimately dwarfed by their prosaic natural consequences: little snail-borne schistosomes killing and maiming tens of thousands of valley residents; little grains of sediment, deposited by the trillions, clogging reservoirs and blocking turbines, causing the washing away of thousands of acres of downstream valley lands and coastline, and cutting off nutrient flows to maritime fishing industries; and so on. See Zygmunt J.B. Plater, Multi-Lateral Lending Banks, Environmental Diseconomies, and the International Lending Process: The Example of Third World Dams, 9 B.C. THIRD WORLD L.J. 169 (1989).

By the end of the 1960s, environmental consciousness had percolated sufficiently as a popular phenomenon and it flooded into the national political process, not as a typical American single-issue reform movement but as a new way of reacting to a wide array of issues. Environmental problems were broadly energizing. They turned out not only to be in everyone’s backyard, but also were perceptibly linked to ever-broader levels of environmental issues, with analogs to a wide array of other social problem areas as well. The citizens grabbed Silent Spring and ran with it. Some ran to the newspapers, some to communes, some to legislatures.

But the center of momentum for the first wave of environmental law clearly went to the courts, using preexisting common and statutory law. In lawsuits filed by environmentally conscious citizens, private nuisance actions became more common in the pollution setting; the public nuisance action grew beyond its traditional settings; the public trust doctrine was rediscovered and applied to complex resource controversies; and attempts were made to retarget statutes like the 1899 Rivers and Harbors Act.

Why did these phenomena happen in the 1960s? Perhaps because of prosperity, education, a mid-century sense of a need for overall assessment of where we were going, and, of course, because the media had given Americans such vivid new perspectives of themselves as a continental village.

74. The debt to the civil rights movement, Vietnam, and Ralph Nader is undeniable. These pioneered the pluralism of people power, citizen-policy analysis, and public interest shadow government, and showed how to open the newsroom and courthouse doors. I would argue that environmental law has achieved a different level of complexity and power, however, because unlike these predecessor initiatives it is not focused on an issue, but rather on the much-broader terrain of the Rachel Carson Paradigm’s analytical construct.

75. Even Richard Nixon was impressed enough with the political appeal of environmentalism that he tentatively proposed a Clean Air Act amendment setting a moratorium deadline on the production of internal combustion engine cars! Nixon said, “The 1970’s must be the years when America pays its debts to the past by reclaiming the purity of its air, its water, and our living environment. It is literally now or never.” This quote is taken from a poster created in 1973 by the Committee to Re-elect the President.

76. Alexis de Tocqueville noted how Americans flocking to single-issue reforms energized the democratic process. 2 ALEXIS DE TOCQUEVILLE, DEMOCRACY IN AMERICA 106-07 (Vintage Books 1990) (1840).

The remarkable diversity of “environmental” issues emphasizes that this “movement” is united not by discrete subject matter but by its way of looking at things. See NLS, supra note 6, at 3. Environmentalism, despite its typical media manifestations, is not just a collection of anecdotes, but a systemic analytical approach. The widespread utility of the Rachel Carson Paradigm also explains why environmentalism did not fade away as the fad it initially was so widely cracked up to be.

tion—notably in the Michigan Environmental Protection Act of 1970, authored by Professor Joseph Sax—\textsuperscript{78}—the statutory approach was to facilitate citizens' environmental standing in court, and the creation of new common law in the public nuisance-public trust areas.

Then began the parade of regulatory statutes over the next several years the like of which we probably will never see again, virtually all driven by popular political fervor—\textsuperscript{79}—the National Environmental Policy Act of 1969, \textsuperscript{80} the Clean Air Amendments of 1970 (CAA), \textsuperscript{81} the Occupational Safety and Health Act of 1970, \textsuperscript{82} the Fish and Wildlife Coordination Act, \textsuperscript{83} the Noise Control Act of 1972, \textsuperscript{84} the Clean Water Act of 1977 (CWA), \textsuperscript{85} the Coastal Zone Management Act of 1972, \textsuperscript{86} and more than two dozen more.\textsuperscript{87} In the years that have followed, the scope and number of environmental statutes have continued to grow.

media cannot be underestimated; much of the early media climate, however, was focused on environmental lawsuits.


\textsuperscript{79} Indeed Congress passed significant federal statutes prior to the late 1960s, including most notably the Wilderness Act, 16 U.S.C. §§ 1131-1136 (1988 & Supp. IV 1992); the Parklands Act, 46 U.S.C. § 1653(f)(4)(F) (1988); 23 U.S.C. § 138 (1988); and the Wild and Scenic Rivers Act, 16 U.S.C. §§ 1281-1287 (1988 & Supp. IV 1992). Each of these, however, was relatively adjectival and circumscribed in effective scope and less the product of wide popular appeal than the back-chamber pressure from the midcentury remnants of the early conservation movement, motivated by a rarefied noblesse. This is not to take away from those important and dramatic accomplishments, but rather to note that they were less a function of the new post-\textit{Silent Spring} paradigm shifts.


\textsuperscript{87} By my count there were 34 important environmental statutes passed in the three years after NEPA. See Zygmunt Plater et al., \textit{Nature, Law, & Society Teacher's Manual} 358-60 (1992) (historical statutory appendix). Only Jimmy Carter's years come close, with 20 in an equivalent span, many of which were perfecting amendments. \textit{Id.} at 360-62.
These modern statutory systems wittingly or unwittingly reflected Rachel Carson's teachings, addressing ecological and economic values and problems that had not been acknowledged or had been inadequately accounted for in previous public and private law, targeting public as well as private enterprises.

NEPA, which figured in the spotted owl litigation, is a prime example. NEPA, whether or not Congress understood what it was doing when it passed the bill, reflected the critically important common-sense decisional principle that, like individuals, government agencies should consider all relevant options and consequences before they acted.88

The pollution statutes created comprehensive federal standards and processes for monitoring and enforcing corporate compliance with them—perhaps the most wide-ranging, voluminous, intricately intensive regulation of human enterprise in our history.89 Planning statutes have attempted to require rational overall programming to guide public and, to a much lesser extent, private decision making. Other statutes focusing on wildlife and endangered species, workplace health, and particular zones of environmental disruption like coastal areas, similarly have attempted to acknowledge systematic problems that previously had not been viewed systematically.

The development of environmental law has been dramatic—a massive upwelling of layer upon layer of substantial public and private law doctrines, almost volcanic in the power and mass of its eruption since the early 1960s.

Today, the extraordinary sweep of subject matter coverage subsumed under the rubric "environmental law" can be attributed to the universality of the Carson Paradigm. Consider environmentalism's amazing subject matter diversity: It includes chemical wastes buried in suburban fields; seal puppies clubbed to death on floating ice packs; uranium fuel rods shipped overseas to nuclear power plants; toxic chemical threats to vulnerable neighborhoods in Italy, India, and Georgia; issues of environmental justice for low-income neighborhoods and communities of color; the imminent extinction of various endangered species; commercialization of national parks; pork-barrel dam building; historical preservation; developing-nation rain forests and desertification; rat bites and

88. It is likely that Congress did not know what it was doing, see NLS, supra note 6, at 600-01, but that does not change the importance of its implicit strategy, which has subsequently been copied far and wide as a basic construct of rational decision making, id. at 600.

89. The Internal Revenue Code and regulations, for instance, have less intensive day-to-day application to industrial production activity and are lesser in bulk than the statutory and regulatory provisions of the CAA, CWA, and Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901-6992k (West 1983 & Supp. 1993).
lead poisoning in urban slums; chlorofluorocarbons thinning stratospheric ozone; global warming; and hundreds more. 90

All of these widely diverse situations are “environmental” issues, and “environmentalists” have taken legal action on each of them—and hundreds of others—over the past few decades with varying degrees of success. 91 Rachel Carson’s perceptions of comprehensive interconnectedness in ecological science quite naturally invited a similar comprehensive accounting beyond the biophysical sphere of environment—acknowledging historical, aesthetic, hedonic, spiritual, communitarian, ethical, quality-of-life values. These too have become “ecological” values in the sense of a larger “human ecology”—as real as and far more widespread than pesticide residues.

V. THE ARRIVAL OF THE PLURALISTIC PARADIGM

The 1960s marked a second fortuitous and dramatic shift in paradigm that launched environmental law: the emphatic arrival of active pluralistic participation in the structures of governance. “Never doubt that a small group of . . . committed citizens can change the world: indeed, it’s the only thing that ever has,” Margaret Mead said; 92 and the 1960s generation took heed.

The most dramatic expansion of new environmental law, the statutory parade beginning in 1970, would have amounted to very little without the extraordinary advent of effective political pluralism in the mid-1960s, most obvious in the new openness of the courts to citizen public interest litigation.

In public law litigation the key was that federal courts allowed citizens to hijack the old bipolar administrative law. The structure of procedural constraints on agencies backed by expanded doctrines of judicial review—designed by regulated industry over the first half of the century to rein in high-handed bureaucracies—was now turned by citizen outsid-

90. See NLS, supra note 6, at 2-3.

91. Each case involves a highly individualized set of scientific facts, economic and political issues, and social and natural consequences. Many have no obvious connection with others on the list, other than an environmental label. The different areas have become so voluminously complex that an expert working on water pollution law, for example, typically has no time to do anything else. A person studying the science and law of endangered plants may have no special knowledge of any other environmental area, and no ties to individuals working on other kinds of environmental cases. Given this diversity, the term “environmental” may seem uselessly broad, describing nothing in particular. At worst, the environmental label can give each of these situations a quixotic implication that may serve to detract from serious public consideration of the merits, although this is changing. But the Carson Paradigm links them all.

ers against the industry-agency establishment itself. Circuit court decisions like *Scenic Hudson Preservation Conference v. Federal Power Commission* \(^9\) in 1966 led to Supreme Court cases like *Citizens to Preserve Overton Park, Inc. v. Volpe* in 1971. \(^9\) These cases established the standing of citizens to demand the same access to agencies and courts, and the same procedural treatment, as the more established "legitimate" bipolar players.

Even more, the courts showed a willingness to give citizens expanded recognition as "private attorneys general" attempting to enforce federal law when the official players would not—and when indeed they were often the defendants. As Warren Burger, no bleeding-heart liberal, wrote in a case in which the agency and industry had built a wall against citizen intervention in the administrative process, "[I]ntervenors representing a public interest [should not] be treated as interlopers. . . . [A] public intervenor is seeking no license or private rights. . . . The public intervenors, who were performing a public service. . . . were entitled to a more hospitable reception in the performance of that function." \(^9\)

When citizen environmentalists attempt to vindicate the public interest against well-heeled corporate adversaries, an agency should not "act as an umpire blandly calling balls and strikes . . . ; the right of the public must receive active and affirmative protection." \(^9\) Starting with *Calvert Cliffs Coordination Committee v. United States Atomic Energy Commission*, \(^9\) NEPA cases epitomized this dramatic takeover. NEPA was, remember, a statute addressed to agencies themselves, with textual mention of enforcement limited to the President and Congress, and a very conscious exclusion of any hint of citizen litigation from its terms. \(^9\)

Yet the courts matter-of-factly proceeded to interpret NEPA to create a cause of action, and citizens have been its *sole* practical enforcement.

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93. 354 F.2d 608, 615 (2d Cir. 1965) (holding that statute may create new interests and rights, thus giving standing). See also Office of Communication of the United Church of Christ v. FCC, 359 F.2d 994 (D.C. Cir. 1966), *appeal after remand*, 425 F.2d 543 (D.C. Cir. 1969), which was not a traditional environmental case, but felt like one.


96. *Scenic Hudson*, 354 F.2d at 620.

97. 449 F.2d 1109 (D.C. Cir. 1971). *Calvert Cliffs* was perhaps the most dramatic early legal showdown between the old industrial-regulatory establishment and the new Carson consciousness employed by citizen groups.

98. NEPA's legislative history clearly demonstrates congressional intent to exclude the spectre of citizen lawsuits. See Richard N.L. Andrews, *Environmental Policy and Administrative Change* 13 (1976); NLS, *supra* note 6, at 600-01.
The pluralist shift was reflected in statutes regulating internal agency procedures as well. The Freedom of Information Act\textsuperscript{99} turned official information policy on its head, providing for a presumption of disclosure with severely limited exceptions.\textsuperscript{100} The government in the Sunshine Act\textsuperscript{101} sought to open the windows of closed-door meetings long dominated by good-ol'-boy inside players.

But the most significant statutory symptom of the pluralist paradigm shift was the explosion of congressionally created citizen enforcement provisions. Drawing on the experience of the civil rights era, the drafters of dozens of new and amended environmental statutes\textsuperscript{102} realized that hopes for reliable enforcement required the efforts of citizen attorneys general. In a quintessentially American move—now being copied by European and other international legal systems\textsuperscript{103}—these statutes gave citizens standing to enforce federal law upon filing a sixty-day notice letter.\textsuperscript{104} Fee-shifting provisions further encouraged citizen enforce-

\textsuperscript{100} Id. § 552 (1988). Prior law reflected the bipolar Establishment position; requested information was presumed not to be disclosed.
\textsuperscript{101} Id. § 552b. The Sunshine Act has been underwhelming in its effectiveness. See FCC v. ITT World Communications, 466 U.S. 463, 473 (1984).
\textsuperscript{103} Principle 10 of the Rio Declaration reads:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

\textit{Rio Declaration, supra note 73, princ. 10.}

ment by allowing citizen plaintiffs who prevailed in whole or part to recover expert witness and attorneys fees.105

The rationale for encouraging citizen enforcement litigation, though obvious, deserves spelling out. It reflects the conjunction of the two paradigms. Public policy had evolved to recognize values and decisional contexts that obstructed or overturned preexisting institutional norms. To rely on the existing bipolar institutions for zealous application of the new standards and procedures was to ask too much of institutional self-interest and good-ol'-boy human nature. Rachel Carson's Paradigm was too threatening to established habits and alliances. Citizen outsiders who understood the new paradigm and were willing to take on the burdens of volunteer pluralism were a structural necessity if reform was to be brought into the system over the passive or active resistance of the old insiders. As in the Forest Service clear-cutting cases, if citizens did not enforce the law, no one would.

Citizen litigation shaped most of the modern administrative structure of environmental law every step of the way, from NEPA as a tangible procedural requirement to the most intricate question of how air pollution offset credits can be brokered in interstate transfers, in a vast swath of law-building.106 Citizen environmentalists have evolved a remarkable range of pluralistic organizations, many with marked sophistication in science, policy analysis, communication, and politics, as well as legal skills. With so much environmental law on the books and so many environmental practitioners in the modern bar,107 environmental law and environmentalism will never again be marginal.

VI. A SUMMARY PERSPECTIVE

This Essay argues that environmental law is a special kind of field, born on the cusp of a particularly significant moment in American social history. Environmental law is not a single issue, not a single area of law.


106. One cannot understand the legal development of major command and control regulatory systems like the Clean Air Act without knowing the role played by NGOs and their attorneys, like Natural Resources Defense Council's David Doniger and Rick Ayres. The primary exception to the primacy of citizen litigation is probably the field of toxics regulation, in which agency initiative has built most of the doctrine not so much in response to citizen litigation as to the astonishing and somewhat anomalous popular political revulsion against toxic contamination.

107. By the early 1980s according to the Environmental Law Institute's Bill Futrell, the number of attorneys practicing environmental law exceeded the number practicing labor law.
It sprang in the 1960s from the confluence of two fundamental societal paradigm shifts, two new ways of looking at the world. The Rachel Carson Paradigm was a decisional analytical construct charting the basic necessity and logic of comprehensive accounting of foreseeable costs and benefits, even if they are indirect and unmarketized. The Pluralist Paradigm of the mid-1960s marked the beginning of a shift from an exclusively bipolar model of governance—in which government agencies were entrusted with the task of counter-balancing regulated market forces—to a multipolar model with active participation by many interested outsiders. The environmental law pluralism that emerged from the confluence of the two is a political process antidote to the fact that the older bipolar cost-externalizing social structures, private and public, have massively resisted the new wisdom.

If the proposition advanced in this Essay has merit, it permits several interesting analytical extensions that are beyond the limits of this present Symposium format. Why in the course of the past twenty-five years has environmental law grown so far beyond pure ecology to include so many social, economic, political, and technological areas, instead of quickly dying out as a single-issue fad as initially predicted? Why has environmental law spread its tendrils so ubiquitously throughout the legal system, instead of just remaining a cozy green corner of the law school curriculum? Why is environmentalism often so erratic, jerry-built, and confrontational? Why is it that the procedures, structures, and players of environmental law so often turn up in other active areas of national governance? If pluralism is functionally important, why is it so undernourished and resisted? And where do we go from here—toward sustainable economics and ecological balance, or not? The proposition of shifting paradigms can help answer these questions.

If the fundamental perceptions of environmentalism are correct—that human decisions do generally tend to ignore cumulative negative consequences, but everything is connected to everything else so we need a decisional system that integrates considerations of the whole—then much of the development of environmental law over the last several decades becomes in retrospect a laboratory of these paradigms, and a harbinger of the future.