

# Species Extinction and Cultural Arrogance: The Perils of Ignoring History

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For more than a century, politicians, newspaper editors, state and federal fisheries managers, and their various constituencies with an interest in salmon have complained, lobbied and petitioned, sought legislative relief, and studied to near extinction the declining runs of the Pacific Northwest's anadromous fish runs. All to no avail, of course. Management efforts have failed; the attempt to establish reliable, predictive models has failed; massive federal expenditures to rescue crashing stocks have failed; and endeavors to achieve consensus about future policymaking have failed. And today one can add to the now familiar story of extinct and endangered salmon, similar tales about ocean groundfish, newly impoverished fishing communities, reductions in fleet size, and more federal bailouts. What is fascinating in the unveiling of this most recent story is the sense of history repeating itself as commercial fishers shift from one species to the next.

The **sources** to these problems, indeed to difficulties with other phenomenon that we refer to as "natural resources," are deeply embedded in our complex economic culture, the core beliefs and assumptions associated with modern capitalism. Under the values associated with this mode of production, the natural world is represented as capital, a vehicle to wealth or to accumulate more wealth. Trees are important largely for their wood fiber; the measure for grasslands is the animal unit months they can support; and fish have value as slabs of meat in the marketplace. To make matters more complicated in our relations with nature, for most of the twentieth century capitalism has fused much of modern science to its purposes, especially in giving privileged status to the needs of production. In fisheries, this has meant heavy industrial support for hatchery programs and management decisions that have abdicated biological responsibility and avoided tough decisions. In his study of Forest Service policy since the Second World War, historian Paul Hirt argued that the agency viewed its responsibility as "overcoming limits, not establishing them." Those attitudes represented the postwar enthusiasm for unending economic growth, a faith in technological solutions, and the existence of what Hirt calls a "'can-do' technocratic optimism." With its emphasis on production science in the effort to keep all of its constituencies happy, the world of fisheries was no different.

One also must not lose sight of the cornucopian dreams

that followed in the aftermath of American success in the Second World War. It is important to look closely at this critical juncture in our history: (1) 1945 marked the end of a period of more than fifteen years of deferred buying; (2) the American people had accumulated incredible savings during the war years; and (3) citizens were optimistic that the postwar period would usher in an era of unending prosperity. The focus of my remarks, however, is the widely held view in the United States that the free-enterprise system and science, technology, and the proper modeling of those techniques would lead to endless prosperity, to the promised land. What contemporaries referred to as "science" may have been vague, but policymakers conveyed to the public an overweening sense of optimism and a conviction that there were technical solutions to all human problems. Among those conceits was the belief that scientific modeling and econometric principles would usher in the brave new world of sustainable resource extraction, that with careful crafted predictive models societies could reach for the stars.

The benefits of science in the postwar era promised to bring ancient millennial dreams into reality, to bring forth an Eden on earth, to finally make humans ascendent in the physical world. The war itself served as a great divide of sorts, an historical transition separating the evolution of basic science that preceded the 1940s with the technological explosion that followed. The prewar advances in science, especially in physics and chemistry, created the conditions for the massive reordering and manipulation of nature. And then, under the pressure of urgent military requirements and with huge infusions of federal monies, those revolutionary advances in scientific knowledge were put to the task of developing new technologies and more productive enterprises. The great outburst of technological innovation that followed the war included the production of a vast array of synthetics, DDT among them, and the further development of nuclear energy that would eventually pose serious threats to all forms of life.

The tremendous productivity of the American economy contributed to widely held assumptions that the country could engineer into existence ever-increasing wealth, security, and financial well-being, that the American people could expect a future without limits in which all things were possible. In The Good Life and Its Discontents,

economist Robert Samuelson observed: “We didn’t merely expect things to get better. We expected all social problems to be solved. We expected business cycles, economic insecurity, poverty, and racism to end.” The American Dream, he concluded, became “the American fantasy.” Truman Moore, who grew up in Myrtle Beach, South Carolina during the 1940s, believed that new inventions and unending discoveries would “bring perfection to humankind,” that the further into the future one could conjecture, “the better things would be.” Synthetics would replace natural resources, thereby providing “an artificial cornucopia to pour forth abundant substitutes for any shortages.” Moore understood part of the postwar promise to mean a world free from flies and mosquitoes, because of the availability of DDT for civilian use. “I liked the smell of it,” he remarked.

We know today that those were unwarranted assumptions and that they were based on false notions about abundance, a skewed vision about the function of science, and that they harbored frightening consequences for the natural world. What I would like to suggest is the importance of history to these discussions. This is after all a story about false optimism, about predictive illusions and failed expectations; it is an account that places expediency rather than prudence in the forefront of policy formulation. But most significant in my view, it is a chronicle that has privileged the logic and directives of the marketplace as the key operating strategy. For much of the postwar period, there has been an absence of social, political, and ecological courage in the exercise of stewardship. Moreover, in most of the literature I have reviewed, the host of values associated with capitalism has never been at the center of the discussion about those difficulties. Historically, Arthur McEvoy argues in The Fisherman’s Problem, market mechanisms have failed to be sufficiently inclusive to embrace changes to ecosystems. And, one might add, they are equally ineffective regulatory tools in protecting natural resources.

The story of Pacific Northwest salmon provides a classic study in which technology and the quest for profits **always** raced ahead of management schemes. For much of the twentieth century, competition among fishers and the development of new methods and places to harvest fish defied legislative efforts to regulate the fishery. For the short run, of course, the Pacific Northwest salmon industry was a tremendously lucrative and efficient operation, yielding huge quantities of salmon for the world’s markets. Despite noticeably declining fish runs well before the onset of the twentieth century, an aura of unlimited abundance prevailed. Eventually industrial practices, especially the introduction of mechanized and more intrusive logging and agricultural activities and accelerating urban growth

quicken the pace of environmental change and contributed to a steady and appreciable decline in salmon numbers. Those human-induced changes, along with the building of dams on major salmon-bearing streams in Oregon, Washington, and Idaho, have now imperiled the future of all salmon runs. “Things go wrong with rivers,” the naturalist Robert Michael Pyle remarked, and for the Columbia “much of what could go wrong already has.”

Because salmon inhabit ecologically and politically volatile environments, much else has gone wrong as well. There was the great “hatchery panacea,” pursued with the objective of Making Salmon, to use the title to Jay Taylor’s excellent history of the Northwest salmon crisis. Similar to the Forest Service’s effort to grow super trees through genetic selection and the generous application of herbicides, hatchery programs represented an aggressive commitment to fisheries production science. The further development of computer models in the early 1980s, according to Gary Morishima and Kenneth Henry, gave fishery scientists “an essential tool for managing ocean salmon fisheries.” If, as Morishima and Henry argue in an essay published earlier this year, “new technology has allowed management of Pacific Northwest ocean salmon fisheries to become information-intensive,” those advances do not appear to have mattered because escapements and catches continued to plummet. Between them, Canada and the United States possess the most sophisticated, science-based fishery knowledge in the world, and yet salmon and groundfish stocks in both nations are imperiled. In that sense, our talents and skills with computers and with economic modeling and statistical abstraction have not stemmed the tide of extinct and endangered fish. Obviously, something has been missing in formulating those assessments!

Salmon are a special case, however, because even in decline, historian Richard White argues, they “remain culturally as powerful as when they passed upriver in a flood of abundant life.” Everywhere along the North Pacific slope they continue to hold great meaning as symbols of nature’s former abundance. Fishery biologist Peter Larkin pointed out nearly thirty years ago that “for cultural reasons alone” enhancing salmon runs would be a popular undertaking and that such activity would be a “natural” politically. Today, we can say that Larkin was right about the question of enhancement. Governments have spent billions of dollars, the number of fishery biologists has quadrupled, and federal and international commissions have been convened to resolve the problem of declining salmon runs. Saving salmon has been and is immensely popular. And yet as the volume of literature on salmon has mounted, policymakers seem increasingly uncertain about the proper course of action to take. The

question of removing the four Snake River dams is only one such discussion. Agency officials have attempted to muddle through with fuzzy “adaptive-management” schemes; the state of Oregon has pioneered still another approach, “collaboration,” hoping upon hope that ranchers will fence streams, that urban dwellers will use organic fertilizers on their lawns and stop washing vehicles in driveways.

But I believe a more important question is the association between the sustainability of fisheries and commercial exploitation. Pulitzer-Prize winning journalist (and novelist) Bill Dietrich cautioned out a few months ago that “there has never been a commercial fishery in the world—ever, at any time—that has been successfully managed for long-term stability. They all collapse.” Dietrich’s statement flies in the face of a number of ideas floating about today, computer-based models and scientific information promoting sustainable development and sustainable resource use. A few years ago when he was still a Macalester College undergraduate, my son remarked that the world was “too random” for most computer-driven, predictive models of ecosystems to work. Indeed, to act otherwise, to assume that predictive models would usher in a new wonder world of stable state environmental conditions is to substitute unsubstantiated theory for wisdom and courage. As Peter Larkin put it in his famous essay on maximum sustained yield, “hypothetical animal populations can produce hypothetical maximum sustained yields, but the same cannot be said of real animal populations.”

In an important policy forum appearing in a 1993 issue of *Science*, Donald Ludwig, Ray Hilborn, and Carl Walters urged readers to be cautious about buying into sustainability schemes, because “future events **cannot** be predicted.” The history of resource exploitation, they argue, is one of inevitable overexploitation, “often to the point of exhaustion or extinction.” They further point out that the real problem is managing humans rather than the reverse. The authors then list several suggestions for effective management: (1) include human motivation and values in regulatory schemes; (2) act **before** scientific consensus is achieved; (3) distrust claims of sustainability, lest it lead to a false sense of complacency; and (4) be tolerant of ambiguity and stand free of the “illusion that science or technology can provide” solutions. Finally, Ludwig and his colleagues conclude that resource problems are really human rather than environmental problems. And, I would add that they are more qualitative than quantitative.

What I am leading to is the systemic nature of the salmon crisis. Let me put this in the form of a question that a reporter asked of former Oregon Environmental Council

official, Andy Kerr, when the latter lived in the small Wallowa Valley town of Joseph. “What do you heat your home with,” the journalist asked in an effort to embarrass the firebrand environmentalist. “I burn salmon,” Kerr shot back, referring to the fact that he heated his house with electricity. This is the point: the problem with salmon is directly and indirectly related to society’s overweening propensity to consume, to acquire an ever-increasing array of toys from luxury homes, to watercraft, to the ever-increasing size of the vehicles that appear on the highways.

The problem with salmon is not with native American fishers, or that we simply don’t care, or that we have totally ignored the environmental issues. Rather, it rests with the wide-ranging and deeply lived values associated with capitalist culture: (1) its propensity for endless technological innovation and increases in production; (2) its capacity to manipulate the physical world; and (3) the insatiable appetite of its populations to consume. By the close of the nineteenth century, the writer Marshall Berman argues, the principal force driving what he called “the maelstrom of modern life” was the “ever-expanding, drastically fluctuating capitalist world market.” That all-embracing system, he added, was “capable of everything except solidity and stability.” The current dynamics of global capitalism suggest that those social and cultural disruptions will continue into the future. I would also add that these are **qualitative** issues, because they raise cultural questions.

History, again, is critical to this discussion. For the last 300 years, capitalism has been the most profound disrupter of natural systems the world has known, a fact that we often lose sight of. It is also a system whose values so thoroughly permeate our cultural world that we are often only vaguely aware of some of its basic assumptions. The British writer and critic Raymond Williams argued that the belief systems associated with capitalism embrace the full spectrum of common sense for most people, indeed, to the extent that it constitutes **the** sense of reality for what we deem social experience. Under the logic and values of capitalism, defining salmon (or any fishery for that matter) solely in economic terms, makes common sense. It also has contributed to our present difficulties, because it ignores the fundamental, qualitative values of our cultural world, ideas that have never been an important component of the discourse about fisheries (or, for that matter, anything else social or environmental).

Biologist Willis Rich made the same point about fisheries several decades ago in the face of the huge dams planned for the Columbia River. It would be a mistake, Rich told his fishery friends, to turn salmon runs into dollar figures, because the fish should be considered “far beyond

their immediate economic power.” “Economics,” Richard White has said, “can make no sense of Columbia River salmon. We now spend far more in saving them than we do in catching them.” Bill Dietrich agrees: “The fate of Columbia River fish has no economic meaning for me.” In a pastoral letter released this spring, the Catholic Bishops of the Pacific Northwest pointed to problems and injustices in the Columbia River watershed: (1) “pollution of the air, land, and water”; (2) extinct, endangered, and threatened salmon; (3) violation of native peoples’ rights; and (4) poverty-level wages for many working people. The Bishops’ statement then comes directly to the point: “*Greed, ignorance, irresponsibility, and abuse of economic and political power* cause these problems and injustices.” As a long-time agnostic, I may be inclined to reconsider my spiritual priorities!