

# WORKING WITH INCONVENIENT TRUTHS: INTEGRATING HISTORY, ENVIROMENTAL SCIENCE, AND CIVIC ENGAGEMENT

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*A page of history is worth a volume of logic.* - Oliver Wendell Holmes

## *Introduction*

In 1872, President U.S. Grant set aside 2 million acres in Wyoming, preserving it from settlement. This area, which would become Yellowstone National Park, was America's first attempt to "manage the wilderness," as opposed to living with it as early colonists had done, or attempting to "conquer it" as settlers had throughout the 18th and 19th centuries. Unfortunately, nobody in the Government had any experience in "managing nature," or even in trying to "preserve" it. It was assumed to be much easier than it proved to be (Crichton, 2004, p. 532). The development of the area went hand in hand with the removal of the Bannock, Shoshone, Blackfeet, and Crow Indian tribes from the area and onto reservations (Steinberg, 2002, p. 150). The Indians, who had already lost their sacred buffalo to white hunters brought to the west by railroads, were granted the right to hunt and trap in the area. They promptly did just that, taking elk and beaver, which were in abundance. The resulting clashes between Indians, white hunters, and, somewhat later, land management officials from the State of Wyoming, resulted in the U.S. Cavalry being called into the area in 1886, where they stayed for 30 years. Then, as most political matters eventually do, the issue became a legal one. The U.S. Supreme Court decision *Ward v. Race* stripped the tribes of their hunting rights, upholding a Wyoming state law regulating the taking of game. (Steinberg, 2002, p. 151) When the park opened it was full of elk, as well as buffalo, bear, deer, mountain lions, coyotes, wolves and bighorn sheep. In the first Presidential Administration devoted to environmental ideas, that of Teddy Roosevelt, the National Park Service was created and immediately set out to pass all sorts of new rules and policies to protect the park and keep it in its natural state. In almost every instance, though, the decisions these early well-intentioned folks established turned catastrophic. First of all, they were concerned about the elk becoming extinct from natural predators like wolves. So they shot and poisoned the wolves. Of course, the elk population exploded, and the vegetation they fed upon started to shrink. This led to a decline in the number of beavers. When the beavers disappeared the meadows dried up,

trout and other fish species vanished, and soil erosion near streams became critical. By the 1920's rangers actually started to shoot elk by the 1,000s, but it was too late; the early natural mix of tees and grasses did not return. Similar decisions were almost predictable: grizzlies were protected, then killed off; wolves, which had first been killed, were later protected; fire prevention polices were established, then rescinded as we learned more about the value of wildfires in nature. When natural fires did return, the forested areas were so densely treed that the fires burned with such intensity that certain tree species were completely eliminated and had to be replanted to come back; beautiful rainbow trout were added to streams in the 1970's, and promptly wiped out the native cutthroat trout species. Over the last few decades other equally confusing "management" policies have been adopted, then rescinded, and in some cases, adopted anew. (Crichton, 2004, p. 532-535)

*We don't know a millionth of one percent about anything.*  
--Thomas Edison

What does the history of Yellowstone have to do with high school social studies classes in Red Oak, Estherville, or Ottumwa? Actually, it has a lot to do with high school social studies instruction. Throughout both the state of Iowa and the U.S., teachers have been seeking opportunities to integrate social studies content with other curricular areas. Of course, social studies instructors have also been at the forefront of keeping their content relevant to the real world, as current events discussions, civic engagement projects and citizenship initiatives regularly confront the cutting controversial issues of the day. There are few issues on the horizon that seem as timely as environmental issues. Global Warming is the obvious example. Last summer's runaway bestseller by Michael Crichton, "State of Fear" sought to ease worries about Global Warming as well as other environmental crises. This summer, Al Gore's "An Inconvenient Truth" turned a PowerPoint presentation on Global Warming into a box office top ten movie hit. (Associated Press, June 6, 2006) Everywhere, students in social studies classes are seizing upon environmental issues and heading out into their home communities to aid in recycling, tree-planting, soil-erosion prevention activities, and to lobby local policy-makers about water and air quality, land use planning and animal rights. Unfortunately they often forget the wisdom of Justice Holmes about history and logic.

In developing environmental civic engagement activities, students need a firm historical and scientific background. Two terrific sources for

instructors are available: "Down to Earth: Nature's Role in American History," (Steinberg, 2002) and "Encounters with the Archdruid," (McPhee, 1971). (Author's note: these two works were key readings in a national workshop for history teachers, sponsored by the Gilder-Lerhman Institute, in Boulder, Colorado in July of 2006. The author's participation in the workshop prompted the ideas for this article.)

The first work is a thorough history of the U.S. "from the ground up," showing how environmental issues helped influence nearly every major era of American History. Steinberg not only tackles the obvious, such as the dependence upon cotton production in the South, and its tie to the Civil War, or how the ravaging of the bison and the Trans-Mississippi West led to the brutal annihilation of Native American cultures, but he meticulously develops the connections between America's natural resources and other eras of history. For example, Steinberg follows the saga of cotton, slavery, and sharecropping in the South with this note, "No place in the South felt the effects of resource extraction more than Appalachia." (Steinberg, 2002, p. 114) He goes on to explain how coal mining helped to shrink the average farm from 350 acres in 1850 to only 173 acres in 1880. (Steinberg, 2002, p. 114) Families sold the best bottomland to coal companies and moved up into the steep hillsides. They became coal-miners; but attempted to complement their poor wages with gardens and livestock on the hillsides. Meanwhile, the lumber in the area was stripped and soil erosion became rampant. The resulting poverty caused many rural families to begin moonshine production by the Prohibition era of the 1920's. They could not even hunt in the nearby woods, as the U.S. Government had sold off the lands to lumber and mining interests. In Steinberg's words, "A region once made up of people able to feed themselves on their own became dependent on other places and ecosystems." (Steinberg, 2002, p. 115) In concluding chapters, Steinberg focuses on modern American issues, and traces them back to the roots including how America became obsessed with the consumption of fast food meat, and the food industry's tie to huge feedlots, hog and chicken confinement centers; and what the accumulation of trash has done to American cities, and how it has changed our culture completely. (Steinberg, 2002, ch. 2-14.)

The book's concluding chapter is particularly interesting, where the author highlights a tremendously ironic story. On April 22, 1998, on Earth Day, the Walt Disney Company opened Animal Kingdom, a nature theme park, which prompted South African ambassador Franklin Sonn to remark, "This is the bush veldt. This is my home." (Quoted in Richard Corliss, "Beauty and the Beasts," Time Magazine, April 20, 1988) But even the

great minds of Disney were not prepared to manage resources. In one 18-month period, wildlife in the park produced 1,680 tons of manure.

Local gardeners were given some, but in the end, Disney had to pay to have the rest trucked away to a county landfill. Local crows and vultures descend on the park regularly to feast on all the food put out by the park managers for the game (Steinberg, 2002, p. 283-284). Steinberg concludes that no culture, certainly not modern America's, has ever been in complete control when it comes to managing the environment. (Steinberg, p. 285)

## *Are You an Environmentalist, or Do You Work for A Living?*

*-- Bumper Sticker seen in Washington Logging Town*

The second work is a priceless gem, which literally places the reader inside conversations that point out basic arguments in virtually all ecological discussion in the U.S. and the world today. The author writes in the first person, and tells of three fictitious "explorations" into America's wilderness areas. In each of three chapters, McPhee introduces readers to real life Americans who have shaped the environmental debates of the last 50 years. Three are powerful planners who seek to "develop" America's resources for future generations; the other is David Brower, for 17 years the leader, if not the heart and soul, of the Sierra Club, and arguably the most famous name in environmental history. A few excerpts from the book are worth mentioning. In the first chapter, Charles Park, a mining engineer who wants to develop a copper mine in a protected wilderness area in the Cascade mountains, lectures the author about the house that naturalist Brower lives in.

Is it painted? Most people don't think about pigments in paint.

Most white pigment now is titanium. Red is hematite. Black is often magnetite. There's chrome yellow, molybdenum orange. The pigments come from rocks in the ground. Dave's electrical system is copper, probably from Bingham Canyon. He couldn't turn on a light or make ice cream without it. The nails that hold the place together come from the Mesabi range...people seldom stop to think about all these things-planes in the air, cars on the road, Sierra Club cups--once, somewhere were rock. Our whole economy-our way of doing things, most of what we have, even our culture-rests on these things. Oh, gad, I haven't even mentioned minerals like manganese and sulphur. You won't make steel without them. You can't make *paper* without sulphur (McPhee, 1971, p. 48-49).

In the second chapter Brower gets his turn as he recites his version of Genesis, where the six days of creation are equal to four billion years:

On this scale a day equals something like six hundred and sixty-six million years, and thus all day Monday and until Tuesday noon, creation was busy getting the earth going. Life began Tuesday noon, and the beautiful organic wholeness of it developed over the next four days. At 4 p.m. Saturday the big reptiles came on. Five hours later, when the redwoods appeared, there were no more reptiles. At three minutes before midnight, man appeared. At one-fourth of a second before midnight Christ arrived. At one-fortieth of a second before midnight, the Industrial Revolution began. We are surrounded with people who think that what they have been doing for that one-fortieth of a second can go on indefinitely. They are considered normal, but they are stark, raving, mad (McPhee, 1971, p. 80).

It is this passionate and almost religious zeal of Brower that comes face to face with Charles Fraser, the resort developer of Hilton Head Island, S.C. It is Fraser who supposedly gives McPhee his title, as he claims, "Conservationists are like druids who used to sacrifice people and save trees." The dialog between the two giants crafted by McPhee is delightful reading.

McPhee saves the best for last, as he brings Brower head to head with Floyd Dominy. The two actually squared off many times over the issue of water. Dominy, as chief of the U.S. Bureau of Reclamation, was the greatest dam-builder in the history of the U.S. He was bested by Brower in a battle to build a dam at the juncture of the Green and Yampa rivers, which flow into the mighty Colorado. That battle cost Brower his leadership of the Sierra Club, when the group lost tax-deductibility status because of lobbying ads authorized by Brower in Eastern newspapers, but Brower is revered because of it. The Bureau of Reclamation concedes: "He licked us. He did it single-handed" (McPhee, 1971, p.167)

McPhee adds:

In the view of conservationists, there is something special about dams, something-as conservation problems go--that is disproportionately and metaphysically sinister. The outermost circle of the Devil's world seems to be a moat filled mainly with DDT. Next to it is a moat of burning gasoline. Within that is a ring of pinheads each covered with a million people-and so on past planked bulldozers and bicuspid chain saws into the absolute epicenter of Hell on earth, where stands a dam (McPhee, 1971, p 158).

Imagine the unimaginable...McPhee joins Brower and Dominy in a guided raft trip down the Colorado River! The sparks fly in the lively dialog, but along the way, McPhee shows his own research skill by going back to both men's childhood years, to find out how the building of dams many years ago impacted both men in a very intimate way.

Every page of this work is rich in history, and rich in science, but most of all, rich in balance. At no time does the reader really learn if McPhee is militant wilderness preservationist, reactionary pro-business developer, socialist-planner, or something else. It is this appreciation for the positive arguments of all the varied arguments in the environmental debate that sets "Encounters with the Archdruid" apart. Balance. What a wonderful concept. One imagines the figure of Lady Justice holding those scales...if we could only apply that simple image to our "scholarly" discussions of those truths we think we know.

*It ain't what a man don't know that makes him a fool; it's what he knows that ain't so.*

*--Mark Twain*

The social studies classroom is, at best, a laboratory where young minds experiment to learn the past and to draw the future. The marriage between the detailed study of history and the passionate action of civic engagement, is, like any marriage, a work in progress. Too often, in our zeal to make the classroom relevant, alive, and connected, we forget to do our own homework. Nowhere is this more true than in the area of civic engagement projects to "save the environment." Before we go about saving anything, we should make sure we are going to improve the situation and not make it worse. I would assert that there are four fundamental prerequisites to such planning.

First and foremost, learn the history of the issue, both local and national. "Down to Earth" is as good a starting point for national history as you will find. Second, do the scientific research. Find out the latest from the best sources. A good place to start is in your own building, by working with biology, chemistry, and earth science colleagues. Thirdly, remember the truism of Tip O'Neil, "All politics is local." Research the community-based sources of power. Who might support us? What groups actually benefit from our "environmental problem" and would likely oppose us? Who has influence with local governmental policy-makers? What could reasonably be accomplished? What will be the CONSEQUENCES OF

OUR ACTIONS...IN THE SHORT RUN AND IN THE LONG RUN on the local economy, population growth, education, government, etc? Finally, have a full and open discussion of the ethical questions. When we say “we” and “they” who do we really mean? Whose “right” is the highest priority? Are we truly balanced in our outlook, or have we begun an activity with hidden, and dangerous biases? “Encounters with the Archdruid” is a terrific place to begin.

If and when we determine that a civic action project has merit, we may feel overwhelmed, and be so frustrated with just obtaining balanced and accurate information that we feel powerless. At that time we should remind ourselves of the wisdom of Mother Theresa, who when asked how she hoped to accomplish anything to make a dent in the lives of the tens of thousands locked in dire poverty in Calcutta, simply responded, “That’s easy, one at a time.” So it is with us. Let’s look at our students and at our community’s problems, and truly think globally and act locally...and do what we can to improve our world.

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