

The Environmentalist's Dilemma

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Henry David Thoreau began his 1862 essay "Walking" with these words: "I wish to speak a word for Nature, for absolute freedom and wildness, as contrasted with a freedom and culture merely civil,--to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society." Tonight I'm going to talk about some of the problems which arise when one attempts to "speak for nature."

About ten years ago I edited a ten-volume anthology of "classic" readings which we use at Lynchburg College. These were originally developed to support a required senior-level capstone course--the Senior Symposium, a loosely organized "great books--great issues" course. The readings are grouped into themes, and I was working on the "Science, Technology and Society" volume trying to broaden the range of issues which it treated. Specifically, I wanted to provide our students with readings which would allow the introduction of environmental issues into the course discussions. As I began to read in this area, I became painfully aware that although I regarded myself as environmentally sensitive, not only did I have little idea of the texts or the ideas which had driven the larger environmental movements, I also had no idea of the movements themselves. About two years ago, Charlie Warren asked me to help create a Center for Environmental Education at Lynchburg College and in so doing greatly raised the pressure for me to better understand both environmental history and philosophy. I was sufficiently arrogant to believe that I knew what students needed to know that I accepted the challenge before I realized that I didn't know enough. Subsequently I have worked to read more widely and to think about programs which would help students develop what I call an "environmental ethic," a framework within which to evaluate competing claims and to make intelligent decisions about the environment, both personal and political. I'm still working on that, but I'm much closer than I was.

You all know that almost every environmental problem creates an intense chorus of opinions from almost every conceivable political group--from liberal to conservative as well as from a bewildering array of environmental interest groups. You can't tell the players even if you have a scorecard. Just this past Sunday, a front-page article in the News and Advance highlighted the difficulties of making real progress in cleaning up the Chesapeake Bay. Reporter Patrick Lynch writes "Environmentalists want strict regulations and caps on pollution and erosion control enforced immediately. . .Managers of sewage treatment plants and industries. . .say the . . .plan's mandates are impractical. ." The "environmentalists" know that they want the rich ecological variety of the bay to be restored. They may not be able to say precisely why it should be so, particularly in ways which the public understands, but they know in their hearts that things are seriously amiss in the bay. Is restoring it a question of morality? Or is the argument to be utilitarian? Or even economic? Their opponents speak mostly in economic terms, pointing out the possible cost of change, or else they focus on a small part of the problem and ridicule it.

I remember talking with local folks in western Indiana about the effects of strip mining. If you've never seen an abandoned strip mine then you won't fully appreciate what I'm saying. I spent a year in Terre Haute in the early seventies and saw the ravaged landscape caused by strip mining of coal for myself. I remember driving into Terre Haute for the first time in the middle of the night and seeing in the distance what appeared to me to be a lighted mountain. Although I had not been there before, I had the strong impression that the country was pretty flat and so I

was surprised. I was even more surprised when, minutes later, I realized that this mountain of lights was moving. It was a strip-mining shovel, larger than any piece of machinery I had ever seen, capable of moving hundreds of tons of earth per minute. Later, as I got to know my new colleagues at Indiana State University and as I traveled about the area and saw the abandoned strip mines which reminded me of what I thought WWI battlefields must have looked like, I asked them how they could stand it. They basically replied that coal was good for the economy and that the coal companies said that reclamation of the mines would raise the price of coal to non-competitive levels. I could not argue convincingly from a moral stance, or from a utilitarian stance, especially since the country was just beginning to emerge from the effects of the OPEC oil embargo.

I faced what philosopher Bryan Norton has called the “environmentalist’s dilemma.” It was a dilemma, not because I did not know what I thought should be done, but rather because I had difficulty explaining why it should be done. If I tried to use an economic argument, then I would have to admit that the operators should take as much coal as they could--up to the sustainable yield of the land. More is better. The value of the land is its market value and that was greatly enhanced by the shallow layers of coal. If, on the other hand, I tried to use a moral argument to decry the use of the land as a mere resource, then I would have to insist on no strip mining. Neither position could express my dismay over the rape of the land and my common sense feeling that the resource should be used. This so-called “environmentalist’s dilemma” is primarily a dilemma in values and worldviews rather than a dilemma regarding actions and policies.

Before addressing this dilemma more directly, I want to share with you a bit of the history of those who speak for nature. And then I will discuss the above dilemma in a bit more detail. Please realize that I am still a neophyte and what I offer today bears no real authority--rather what a rank amateur has gleaned as a base for future study. Also recognize that I have drawn heavily on the works of others in presenting this paper.

Certainly the western view that nature was given by God to humans and that humans were to have dominion over nature has had profound implications for the environment. The 28th verse of Genesis I [And God blessed them; and God said to them “Be fruitful and multiply, and fill the earth and subdue it; and rule over the fish of the sea and the birds of the sky, and over every living thing that lives on the earth.”] and the fourth through eighth verses of the eighth Psalm make clear the Judaeo-Christian roots of this attitude. Early in the seventeenth century, Francis Bacon argued that science could be used to create a utopian paradise in which humans would recover the biblical authority over the creatures of the earth as outlined in Genesis. Much of Bacon’s work displays use of the sexual metaphor in which nature is female. Writing in “The Great Instauration,” he says: “I mean it [this book] to be a history of Nature free and at large (when she is left to her own course and does her work her own way)--such as that of the heavenly bodies, meteors, earth and sea, minerals, plants and animals--but much more of nature under constraint and vexed; that is to say, when by art (techn_) and the hand of man she is forced out of her natural state, and squeezed and moulded. . .”

John Muir was 24 years old when Thoreau wrote his essay on “Walking.” As the Civil War unfolded, he left college and walked north to Canada to avoid the draft. In A Thousand Mile Walk to the Gulf, he described his feelings upon discovering a rare plant. “I felt as if I were

in the presence of superior beings who loved me and beckoned me to come. I sat down beside them and wept for joy.” Muir went on to write: “I cannot understand the nature of the curse. ‘Thorns and thistles shall it bring forth to thee.’ Is our world indeed the worse for this ‘thistly curse?’ Are not all plants beautiful? Would not the world suffer by the banishment of a single weed? The curse must be within ourselves.” Although Muir was not the only writer of natural history during this period, he arguably was the best known. As founder of the Sierra Club, and as the originator of the “preservationist” view of nature, Muir argued his position on moral grounds, and influenced public policy through his support of the creation of a system of national parks. My First Summer in the Sierra provides insight into his passionate love of nature, wild and unaffected, as well as to the beauty of Yosemite.

Gifford Pinchot became a forester when his father decided to retire to a gentleman’s estate and asked his son to manage it. He entered Yale, where he studied meteorology, astronomy, botany and geology before traveling to Europe to study forestry as a formal discipline. When he returned, he became the nation’s first professional forester, creating and defining the forestry profession in America. Working for the Forestry Service, Pinchot eventually developed a utilitarian view of nature. In Breaking New Ground, he wrote that as he pondered the interrelationships among the various dimensions of his role as a forester, including trees, stream management, public lands, mining policies, game management, soil erosion, he realized that “here was one single question with many parts. Seen in this new light, all these separate questions fitted into and made up the one great central problem of the use of the earth for man.” His utilitarian view led him to embrace the word conservation, which his friend Theodore Roosevelt accepted with great enthusiasm. Although Pinchot primarily focused on the management of forest resources for material gain, others immediately saw the implications for using similar policies to achieve “game management” and “fish management.”

From an historical perspective, Muir and Pinchot can be regarded as creators of two powerful streams in American environmental thinking. Muir and the Sierra Club which he founded are the embodiment of the preservationist movement, while Pinchot and his disciples founded the modern conservation movement. One can easily see the contrast by reading Muir’s My First Summer in the Sierra and then reading Pinchot’s Biltmore Forest. The Vanderbilt family had employed Pinchot to devise a plan for managing the forest of the newly constructed Biltmore Estate. His practical approach to analyzing the resource and planning to provide maximum sustainable yield is especially clear. The autobiographical Breaking New Ground not only provides insight into Pinchot’s thinking, it also provides glimpses into his relationship with Muir, which began cordially and deteriorated as the two men developed their divergent philosophies. The final break occurred as the two clashed over plans to dam the Hetch-Hetchy canyon, as so well described in a recent Sphex paper by Graham Gilmer.

Aldo Leopold was trained at the Yale Forest School, which had been created by gifts from the Pinchot family, and thus was very much in the mold of Pinchot as a professional forester. While he could analyze forest productivity in the coldest terms, Leopold actually became a forester because of a deep and abiding love for the outdoors. Shortly before his death, he published a collection of writings taken from his journal along with several essays which summarized his career. A Sand County Almanac, one of the most widely read and loved of all environmental texts, is generally recognized as a key text in the study of the environment. In

particular, the pivotal essay entitled "The Land Ethic" pointed out the failure of Pinchot's belief that economic expediency should drive land management. Leopold had come to believe that humankind have an ethical duty to the environment, as well as to others of their own kind. Instead of "mastering" the earth, mankind has a duty to live as a citizen of the earth--at the same level as its other inhabitants.

In order to be a bit more concrete, let's return to the Chesapeake Bay question. In recent years, a variety of attempts to "save the bay" have arisen. Some claim that the bay is dying. Strictly speaking, that will not happen. But the Bay and the surrounding water system are changing to a new and less desirable way of functioning. Phytoplankton populations have exploded due to widespread increases in nutrients, especially from phosphorus and nitrogen. The increase in Phytoplankton decreases water clarity and thus reduces the growth of underwater grasses, which traditionally absorb such nutrients, passing them up the food chain to larger animals. Extremely salty water collects in the deep regions of the bay and remains oxygen poor for longer and longer periods of time. Harvests of fish and shellfish have decreased. Harvesting of rockfish, long a symbol of the bay's bounty, was discontinued years ago.

Clearly the Chesapeake bay is sick; its ecology disrupted and changed by human intervention. The complex chain of its being is slowly becoming strangled by human wastes. Management of the region represents one of the extreme challenges to the general goal of conserving or preserving nature. It's difficult to know precisely what "preservation of the natural" state of the bay would mean in the heavily developed and rapidly expanding region. One point is clear, even to the most ardent environmentalist. We cannot turn the clock back to an earlier, predevelopment stage in the process.

The causes of bay deterioration cannot be traced solely to some specific activity of human polluters, but to population growth itself, and to functions that arrive naturally with that growth. It took hundreds of years for the population in the watershed to reach eight million. In the past thirty years, the population shot up another 50 percent and it continues to grow, especially in the ecologically sensitive waterfront areas. Its current state is the result of what William Odum, the late Chair of the Department of Environmental Sciences at the University of Virginia, called "the tyranny of small decisions." By that, he meant that environmental problems seldom can be attributed to evil people, plotting to destroy the environment. Rather they arise from the cumulative effects of many ordinary decisions on the part of ordinary people--decisions which seem innocent enough at the time they are made. Ask persons who live in Florida. Someone decides to build a home on a lake. Since there is no sewer, the house is connected to a septic tank. Before long, the entire lake is surrounded by homes, each connected to a septic tank. Then the lake is found to be polluted with unacceptable levels of fecal coliform, and thus is unfit for the recreation purposes which brought the first homeowner there.

The Chesapeake Bay region is at the cutting edge of environmental problems and the search for solutions. Despite the enormity of the challenge, a remarkable political consensus has emerged in the Chesapeake region. A bay summit was convened in 1983, and politicians from Maryland, Virginia, Pennsylvania and the District of Columbia pledged a region wide effort to clean up the bay. Deterioration of bay quality, all participants seemed to agree, could be reversed only by a cooperative effort to go beyond atomistic thinking to direct attention toward the overall health of the entire bay system.

"We are throwing out our old maps of the bay," wrote Tom Horton, who manages an environmental education center on Smith Island, in the middle of the Chesapeake. "They are outdated not because of shoaling, or erosion or political boundary shifts, but because the public needs a radically new perception of North America's greatest estuary." The new maps include all of the bay's tributaries and, on them, the bay proper "is a relatively small puddle, surrounded--almost overwhelmed--by the lands of a watershed 30 times its size." Thinking of the bay as a living system also requires a recognition that it is a dynamic system, changing and adapting through time.

Habitation of the Chesapeake by European settlers and their offspring has introduced irreversible changes into the bay system; the further a region gets from the natural baseline, the more local history has transformed natural processes, creating a new balance between natural and human forces.

This very intrusion may be the key to integrating humans into their natural environment. There is an identifiable Chesapeake Bay culture which depends for its meaning on the rich natural context in which it has evolved. Human culture is "natural" to the degree that it retains and protects this integration in the future. Saving the unique cultural heritage of the Chesapeake Bay is so intertwined with the task of saving its natural context that they have become a single task. Watermen without oysters will be, at best, cigar-store Indians.

Because changes we now see occurred so slowly that they were not noticed for several centuries, we know the bay embodies processes capable of integrating and damping out considerable human impacts. As human development has continued, a new system, incorporating human and natural forces and structures, has evolved. The key to intelligent management in such cases will be to understand human systems as relatively fast-changing systems of agricultural use, changing housing patterns, and so on that affect the larger and slower-changing natural systems that provide the context for human systems. Professor Norton has written that the goal of whole ecosystem management, in the context of a rapidly developing estuarine watershed, means paying constant attention to the contextual effects that result from increments of growth and to environmental stresses caused by changes in economic forces and human taste.

In counterpoint, as of 1984, Maryland had 891,000 acres approved for new development, which represents 500 percent of the projected needs of the state for the next 13 years. Worse, a rush of new subdivisions and rezonings was precipitated in anticipation of the stronger controls on growth. Local governments have, for the most part, written their plans so as not to interfere with but only to control somewhat the effects of continued development in their areas.

The so-called "point-source" pollution of the bay has largely been stopped in all of its major tributaries, with the debatable exception of city and town sewage discharges. But the fertilizer runoff from farms and lawns alone still contributes mightily to the problem.

Restrictions on development, although useful in mitigating problems on the immediate edges of the bay and its tributaries, are therefore unlikely, by themselves, to save the bay system. As long as local governments continue to see development as an economic resource, and the bay as a "commons" attracting new second-home customers, it is doubtful that the decline of the Chesapeake will be reversed. The well-meaning and innovative initiatives already begun must be strengthened.

Again, quoting Bryan Norton, "The lesson provided by the Chesapeake bay is that all

environmentalists, regardless of their allegiance to diverging traditions, must seek to manage the entire mosaic that is the American landscape. If we are to work to maintain the productivity of American agriculture *and* protect biological diversity, if we are to maintain adequate water supplies for homes and industry *and* preserve some wild and scenic rivers, if we are to provide sufficient opportunities for outdoor activities *and* preserve the pristine nature of wilderness areas; if we are to continue to use fossil fuels and avoid global warming, we must make large-scale land use and environmental decisions with an eye to their larger context. A landscape that can accommodate all of the varied aspirations of Americans will have to be a patchy landscape, in which urban elements, productive elements, and pristine elements are arranged intelligently. Each of the patches must be managed according to the methods appropriate to goals that define its use, but those methods must also be designed to enhance, or at least not destroy, the values sought elsewhere in the mosaic. Further, the principles of this holistic management must be aesthetic as well as economic, and historically informed as well as forward looking. But they must be applied to the entire context of human activities, not to specific activities viewed either atomistically or in isolation from other activities.

The forced abandonment of the two extreme styles of management associated with the old split between conservationists and preservationists provides a useful first stab at characterizing the emerging environmental consensus. It also rescues one from the environmentalist's dilemma by defining values in a more holistic manner.

The common denominator of these obligations of resource users to limit their activities in these diverse cases cannot be understood as a commitment to any particular moral principle such as the moral equality of all species or of interpersonal equity. The common element is structural: in each case, individually motivated behaviors, which can be understood as activities of economic man, are constrained because of the impacts those behaviors impose on their larger context. Environmentalists emphasize total diversity and biological complexity because the complex processes that constitute biological systems *are* the larger context of all life, human and nonhuman. Rapid alteration of those larger systems will cause serious disruption of both human and nonhuman activities. Land must therefore be used according to patterns that protect the complex processes of nature, so as to avoid destabilizing changes, changes in environing systems that are too rapid to allow human activities and nonhuman processes to respond and adapt.

As an aside, many western European countries have very strict land use policies. In Germany, for example, it is difficult to impossible to find land to develop for residential purposes. Every acre of land is managed and designated for some use. The types of suburban sprawl which characterizes so much of the US simply aren't allowed. One finds instead small villages, separated by lands designated for farming, for vineyards, for forests, etc. Here, someone would build a convenience store halfway between two adjacent villages. Then someone would place a mobile home near the convenience store, or open a farm implement store and soon the entire space between the two villages would be developed in some haphazard fashion. That can't happen in Germany. I'm not necessarily arguing that the German policy is better--it's very difficult to buy a home there. Their policy is necessary because of their context. That's the essential point.

Now back to the Chesapeake Bay; only four years after a moratorium on taking the popular rockfish was imposed, catches of the region's newly favored sportfishing species, the

bluefish, dropped precipitously in 1989. Conservationists, worried about the effects of shoreline pollution and unrestricted harvesting of the once plentiful bluefish, began to call for controls on fishermen. Likening the present situation to the slaughter of the bison or the passenger pigeon, they note that bluefish can be caught in large numbers (especially with sonar assistance in locating schools), and amateur fishermen who have no use for a dozen large fish often take them home only to throw them in the trash a few days later.

Hearings were held on proposed first-ever limits on the catch of bluefish. The battle lines were formed; still angered by the rockfish ban, charter captains denied that the bluefish were overfished and prepared to fight any restrictions on bluefish catches. They argued that the bad season was due to hard luck. They believed that there were not fewer bluefish, but that the fish stayed out of the bay because heavy rains reduced water salinity. Environmentalists were less sanguine:

This emerging situation should by now seem strikingly familiar. Individuals, who have exploited a resource for years, gathering the fruits of an apparently inexhaustible source of nature's bounty, develop an economic interest and an attitude that they have an individual or proprietary "right" to its continued free use. In the area of land use, to cite another example from the Chesapeake region, the Critical Areas Commission has recognized the need for strong local zoning to limit development in the immediate vicinity of the bay and its tributaries. Local governments are asked to develop local ordinances that protect critical areas. On the local level, developers and landowners are fighting to implement this system of controls so as to maximize their own development rights to the fullest.

Garrett Hardin's 1968 essay "The Tragedy of the Commons" argued that individuals who find themselves using a general resource--a "commons"--act to expand their own ability to use that resource, fully understanding the personal economic benefit of doing so. They also realize that if their use of the resource threatens the system which uses the resource, the larger society will share the resulting costs. So, Hardin argued, individuals who exploit resources are driven by their interpretation of the logic of the situation toward an obvious and inevitable "tragedy." Hardin's discussion provides a general model which applies to many environmental problems, from the timber industry to fishing to real estate development. The situation I mentioned with lakes in Florida is a prime example, as is the bluefish debate.

Hardin's model shows that environmental problems have a common structure, and that this structure is inherent in any situation in which individuals, acting in their individual self-interest, exploit a common social resource, whether that resource is a river, a bay, or even the atmosphere.

According to this model, it is in the nature of environmental problems that they eventually emerge on a higher, contextual level as the activities of individuals, such as charter captains, fishermen, and farmers, tend toward more and more intense use. The model therefore explains the insight that environmentalists usually react to social and environmental trends. It is in the nature of the environmentalists' response to these problems that they occupy a more synoptic place; in trying to think like a mountain, environmentalists understand human activities as they affect larger systems, in their larger spatial and temporal contexts.

My son James introduced me to the idea that future disputes will center on the proper "place" from which environmental problems should be observed, discussed, and decided. One

can use this concept of "place" in an informal, intuitive sense, as when one says to a friend or associate: "I know we disagree, but if you were standing in my place, I think you'd agree with me," and also in a more formal philosophical or economic sense. I will only consider it in the first sense for now. (Theorists recognize that the analysis of any complex system will depend upon the observer's viewpoint and on the scale of resolution adopted, which is a function of the place the observer assumes in viewing the complex system.)

Standing in the place of charter captains, who think in the time-scale of economic reasoning and see their personal investment and livelihood threatened, limits on bluefish catches appear as an unjustified attempt by centralized authorities to limit personal freedom. The captain doubts that the meager data represent anything more than a blip in the natural cycles of weather and migration. Conservation-oriented resource managers, from their expanded place, see warning signals in the decline in bluefish harvested. Looking at the problem not just on an annual scale, but also projecting catches into the next decade and beyond, the conservationist suggests voluntary behavioral modifications and perhaps limits on daily take.

From the environmentalists' vantage point, on the on a larger systematic time scale, the decline in bluefish in the bay is serious. Environmentalists worry that it may be a replay of the rockfish case. If the short time-frame decisions of individual fishermen are reducing the bluefish populations rapidly, the fishery could be destroyed before data determining the limits of exploitation are gathered. Reliable data to document that overfishing is causing the decline of the bluefish fishery are slow to gather, because they are gathered from a slowly changing system. It is always difficult, in such cases, to distinguish true trends from cyclical changes. This is also the case for global warming.

Of course, the charter captains and fishermen may well be correct: Next year may bring record harvests of bluefish. Nobody, least of all environmentalists, doubts the existence of natural cycles. If environmentalists cry "wolf" in a case that turns out to reflect only a natural cycle, however, they can lose their credibility. It is in the nature of their position that they are always waiting for data to support their claims that accelerated changes in contextual systems are imminent. They are often, therefore, reduced to saying, "Better safe than sorry."

In the fishermen's frame of time, the environmentalist is proposing limitations on their individual freedoms. Looked at in the longer time-frame of environmentalists who advocate "thinking like a bay," this means simply paying attention to the larger and more slowly changing context, the scale of time in which populations wax and wane, the context of the fishermen's behavior. Looked at from a long-term perspective, fishing restrictions seem like a minor limitation on individual (short-term) freedoms in the interest of protecting those very freedoms through long periods of time. Environmentalists, by arguing that we should approach limits of nature cautiously, are trying to hold options--freedoms--open to future generations, but in doing so, they inevitably find themselves trying to restrict those same individual freedoms in a shorter frame of time.

Choice of a "place" from which to diagnose, discuss, and solve environmental problems, however, is not just political; it also has conceptual, scientific, and moral aspects. Choosing a place, therefore, is inseparable from choosing a world view. For this reason, discussions of environmental policy often sound like exercises in turf protection.

The question remains, Can we "save nature itself;" the wildness that is the origin of our

existence, at least in a few places? But we also live in urban areas. Cities, the ultimate context of most future peoples, have a natural context also. Environmentalists do not advocate managing Manhattan as they do Yellowstone, to maximize the autonomy of natural forces. And yet environmentalists believe that the management of urban areas in the future should be based upon a sensitive recognition of the effects of cities on their larger natural contexts. Environmentalists direct attention to the ways in which trends in individual behaviors affect larger systems. I believe that environmentalists must educate the public to see the overall dynamic and the importance of seeing environmental problems from a large-scale contextual perspective.

Whaling is rapidly fading away as an economic activity. Whale populations are so depleted that the search becomes ever more expensive. Technology has found substitutes for all but the most esoteric uses of whale oil. Environmentalists therefore insist that whaling is no longer an appropriate activity, even if there are governments that will prop up the dying industry with economic subsidies. If environmentalists and others succeed in the desperate effort to save populations of the great whales, however, perhaps a whole new, nonconsumptive, and dynamic industry, whale watching, will take its place. Children of future generations may pay to watch a great whale swim playfully under their boat and breach a few yards away. The fragile freedom to kill whales can be replaced with a more secure freedom, a freedom consonant with the life history of these great, but not reproductively prolific, creatures.

And this suggests the proper answer to charter boat captains who are justifiably wary of catch restrictions given the present attitudes of charter renters. The charter captains have an obligation to educate as well as profit from their customers. The whale-watching case suggests how salable a natural spectacle is. Participation in a bluefish run should be reward enough-- and it would be if fishermen carried away information and understanding as well as a couple of bluefish. Charter captains should teach themselves some marine ecology and pass it on as a part of their explanations of why, next year, we're going to release all bluefish but three per fisherman. This is the proper response to a demand for bluefish that cannot be met indefinitely: educate the public and have them pay for it as part of the skills of a competent charter captain. If charter captains will not educate their fishermen, who will?

The freedom to catch rockfish and bluefish, or to propel ourselves about the countryside by burning petroleum are fragile freedoms. As freedoms they depend on the relatively stable environmental context in which they have evolved. My environmental instincts should lead me to teach the public that nature's gifts embody an ancient wisdom from which we can learn, and I should also show the public how our human activities are not only possible, but also gain meaning and value, only in a larger context. In so doing, I might reach a goal of reducing the impact of those freedoms. Catching rockfish or bluefish is not wrong in the absolute terms of interpersonal morality; they simply may be inappropriate in the total context of the Chesapeake bay.

Trips to the Bay should be explorations of a larger world than the limited sphere of economic activity in which we spend most of our lives. Like Muir and Leopold education for an environmental ethic should emphasize the joy of observation. I can avoid the environmentalists' dilemma by encouraging students to see the world through a lens larger than a cash register. Moralists among environmental ethicists have erred in looking for a value in living things that is *independent* of human valuing. They have therefore forgotten a most elementary point about

valuing anything. Valuing always occurs from the viewpoint of a conscious valuer. Since I doubt that bluefish are conscious, I doubt they are loci of value-expression. To recognize that only the humans create values, however, need not lead to the conclusion that the bluefish can be valued only from the narrow perspective of human economics. If I can teach people to value bluefish or clean water or clean air in a larger perspective, an ecological context in which bluefish are fellow travelers in a huge, creative adventure, I believe I will have done something important.