

of industry. See, it's not Pennsylvania that's red it's just Philadelphia, Erie and Pittsburgh. Look at West Virginia here, there's only two red spots, the Kanawha Valley, where there are nine chemical plants including Union Carbide's, and this industrialized stretch of the Ohio River. It's the same story wherever you look."

There are 50,000 toxic waste dumps in the United States. The EPA admits that *ninety per cent* of the 90 billion pounds of toxic waste produced annually by US industry (70 per cent of it by chemical companies) is disposed of "improperly" (although we wonder what they would consider "proper" disposal). These deadly products of industrial civilization—arsenic, mercury, dioxin, cyanide, and many others—are simply dumped, "legally" and "illegally," wherever convenient to industry. Some 66,000 different compounds are used in industry. Nearly a billion tons of pesticides and herbicides comprising 225 different chemicals were produced in the US last year, and an additional 79 million pounds were imported. Some two per cent of chemical compounds have been tested for side effects. There are 15,000 chemical plants in the United States, daily manufacturing mass death.

All of the dumped chemicals are leaching into our water. Some three to four thousand wells, depending on which government agency you ask, are contaminated or closed in the US. In Michigan alone, 24 municipal water systems have been contaminated, and a thousand sites have suffered major contamination. According to the *Detroit Free Press*, "The final toll could be as many as 10,000 sites" in Michigan's "water wonderland" alone (April 15, 1984).

And the coverups go unabated here as in the Third World. One example is that of dioxin; during the proceedings around the Agent Orange investigations, it came out that Dow Chemical had lied all along about the effects of dioxin. Despite research findings that dioxin is "exceptionally toxic" with "a tremendous potential for producing chlor-acne and systemic injury," Dow's top toxicologist, V. K. Rowe, wrote in 1965, "We are not in any way attempting to hide our problems under a heap of sand. But we certainly do not want to

have any situations arise which will cause the regulatory agencies to become restrictive."

Now Vietnam suffers a liver cancer epidemic and a host of cancers and health problems caused by the massive use of Agent Orange there during the genocidal war waged by the US. The sufferings of the US veterans are only a drop in the bucket. And dioxin is appearing everywhere in our environment as well, in the form of recently discovered "dioxin rain."

### GOING TO THE VILLAGE

When the Indian authorities and Union Carbide began to process the remaining gases in the Bhopal plant, thousands of residents fled, despite the reassurances of the authorities. The *New York Times* quoted one old man who said, "They are not believing the scientists or the state government or anybody. They only want to save their lives."

The same reporter wrote that one man had gone to the train station with his goats, "hoping that he could take them with him—anywhere, as long as it was away from Bhopal" (December 14, 1984). The same old man quoted above told the reporter, "All the public has gone to the village." The reporter explained that "going to the village" is what Indians do when trouble comes.

A wise and age-old strategy for survival by which little communities always renewed themselves when bronze, iron and golden empires with clay feet fell to their ruin. But subsistence has been and is everywhere being destroyed, and with it, culture. What are we to do when there is no village to go to? When we all live in Bhopal, and Bhopal is everywhere? The comments of two women, one a refugee from Times Creek, Missouri, and another from Bhopal, come to mind. The first woman said of her former home, "This was a nice place once. Now we have to bury it." The other woman said, "Life cannot come back. Can the government pay for the lives? Can you bring those people back?"

The corporate vampires are guilty of greed, plunder, murder, slavery, extermination and devastation. And we should avoid any pang of sentimentalism

when the time comes for them to pay for their crimes against humanity and the natural world. But we will have to go beyond them, to ourselves: subsistence, and with it culture, has been destroyed. We have to find our way back to the village, out of industrial civilization, out of this exterminist system.

The Union Carbides, the Warren Andersons, the "optimistic experts" and the lying propagandists all must go, but with them must go the pesticides, the herbicides, the chemical factories and the chemical way of life which is nothing but death.

Because this is Bhopal, and it is all we've got. This "once nice place" can't be simply buried for us to move on to another pristine beginning. The empire is collapsing. We must find our way back to the village, or as the North American natives said, "back to the blanket," and we must do this not by trying to save an industrial civilization which is doomed, but in that renewal of life which must take place in its ruin. By throwing off this Modern Way of Life, we won't be "giving things up" or sacrificing, but throwing off a terrible burden. Let us do so soon before we are crushed by it.

### STUDY QUESTIONS

1. Does Watson make his case that Western industrial society is dangerous to humanity and nature and needs to be rejected? What are the implications of his indictment? What sort of world do you think he would want us to live in? Is Watson a "Luddite"? (Luddites were people in England in the early nineteenth century who went around destroying machines because they believed that the Industrial Revolution was evil.)
2. Is the anger that comes through in this article justified? Is modern industrial practice really morally irresponsible? Explain your answer.
3. How might someone in the business community respond to Watson's essay? Can our industrial practices be defended?

## 71

### People or Penguins: The Case for Optimal Pollution

WILLIAM F. BAXTER

*William Baxter (1929–1998) was a professor of law at Stanford University and the head of the Antitrust Division of the U.S. Justice Department. He wrote People or Penguins: The Case for Optimal Pollution (1974) from which this selection is taken.*

*In this essay, Baxter aims at clarifying the relationship between resource use and pollution. They are the opposite sides of the same coin, the privilege and its price, the good and the bad. He argues that a nonanthropocentric ethic is neither justified nor practically feasible. However, even within an anthropocentric ethic, it remains the case that we cannot have a pollution-free society without harming humans. If we are humanists, committed to promoting the human good above all else, as he is, we should be willing to allow pollution where it harms animals and trees, so long as the overall benefits accrue to human beings.*

I start with the modest proposition that, in dealing with pollution, or indeed with any problem, it is helpful to know what one is attempting to accomplish. Agreement on how and whether to pursue a particular objective, such as pollution control, is not possible unless some more general objective has been identified and stated with reasonable precision. We talk loosely of having clean air and clean water, of preserving our wilderness areas, and so forth. But none of these is a sufficiently general objective: each is more accurately viewed as a means rather than as an end.

With regard to clean air, for example, one may ask, "how clean?" and "what does clean mean?" It is even reasonable to ask, "why have clean air?" Each of these questions is an implicit demand that a more general community goal be stated—a goal sufficiently general in its scope and enjoying sufficiently general assent among the community of actors that such "why" questions no longer seem admissible with respect to that goal.

If, for example, one states as a goal the proposition that "every person should be free to do whatever he wishes in contexts where his actions do not interfere with the interests of other human beings," the speaker is unlikely to be met with a response of "why." The goal may be criticized as uncertain in its implications or difficult to implement, but it is so basic a tenet of our civilization—it reflects a cultural value so broadly shared, at least in the abstract—that the question "why" is seen as impertinent or imponderable or both.

I do not mean to suggest that everyone would agree with the "spheres of freedom" objective just stated. Still less do I mean to suggest that a society could subscribe to four or five such general objectives that would be adequate in their coverage to serve as testing criteria by which all other disagreements

might be measured. One difficulty in the attempt to construct such a list is that each new goal added will conflict, in certain applications, with each prior goal listed; and thus each goal serves as a limited qualification on prior goals.

Without any expectation of obtaining unanimous consent to them, let me set forth four goals that I generally use as ultimate testing criteria in attempting to frame solutions to problems of human organization. My position regarding pollution stems from these four criteria. If the criteria appeal to you and any part of what appears hereafter does not, our disagreement will have a helpful focus: which of us is correct, analytically, in supposing that his position on pollution would better serve these general goals. If the criteria do not seem acceptable to you, then it is to be expected that our more particular judgments will differ, and the task will then be yours to identify the basic set of criteria upon which your particular judgments rest.

My criteria are as follows:

1. The spheres of freedom criterion stated above.
2. Waste is a bad thing. The dominant feature of human existence is scarcity—our available resources, our aggregate labors, and our skill in employing both have always been, and will continue for some time to be, inadequate to yield to every man all the tangible and intangible satisfactions he would like to have. Hence, none of those resources, or labors, or skills, should be wasted—that is, employed so as to yield less than they might yield in human satisfactions.
3. Every human being should be regarded as an end rather than as a means to be used for the betterment of another. Each should be

afforded dignity and regarded as having an absolute claim to an evenhanded application of such rules as the community may adopt for its governance.

4. Both the incentive and the opportunity to improve his share of satisfactions should be preserved to every individual. Preservation of incentive is dictated by the "no-waste" criterion and enjoins against the continuous, totally egalitarian redistribution of satisfactions, or wealth; but subject to that constraint, everyone should receive, by continuous redistribution if necessary, some minimal share of aggregate wealth so as to avoid a level of privation from which the opportunity to improve his situation becomes illusory.

The relationship of these highly general goals to the more specific environmental issues at hand may not be readily apparent, and I am not yet ready to demonstrate their pervasive implications. But let me give one indication of their implications. Recently scientists have informed us that use of DDT in food production is causing damage to the penguin population. For the present purposes let us accept that assertion as an indisputable scientific fact. The scientific fact is often asserted as if the correct implication—that we must stop agricultural use of DDT—followed from the mere statement of the fact of penguin damage. But plainly it does not follow if my criteria are employed.

My criteria are oriented to people, not penguins. Damage to penguins, or sugar pines, or geological marvels is, without more, simply irrelevant. One must go further, by my criteria, and say: Penguins are important because people enjoy seeing them walk about rocks; and furthermore, the well-being of people would be less impaired by halting use of DDT than by giving up penguins. In short, my observations about environmental problems will be people-oriented, as are my criteria. I have no interest in preserving penguins for their own sake.

It may be said by way of objection to this position, that it is very selfish of people to act as if each person represented one unit of importance and nothing else was of any importance. It is undeniably

selfish. Nevertheless I think it is the only tenable starting place for analysis for several reasons. First, no other position corresponds to the way most people really think and act—i.e., corresponds to reality.

Second, this attitude does not portend any massive destruction of nonhuman flora and fauna, for people depend on them in many obvious ways, and they will be preserved because and to the degree that humans do depend on them.

Third, what is good for humans is, in many respects, good for penguins and pine trees—clean air for example. So that humans are, in these respects, surrogates for plant and animal life.

Fourth, I do not know how we could administer any other system. Our decisions are either private or collective. Insofar as Mr. Jones is free to act privately, he may give such preferences as he wishes to other forms of life: he may feed birds in winter and do less with himself, and he may even decline to resist an advancing polar bear on the ground that the bear's appetite is more important than those portions of himself that the bear may choose to eat. In short my basic premise does not rule out private altruism to competing life-forms. It does rule out, however, Mr. Jones' inclination to feed Mr. Smith to the bear, however hungry the bear, however despicable Mr. Smith.

Insofar as we act collectively on the other hand, only humans can be afforded an opportunity to participate in the collective decisions. Penguins cannot vote now and are unlikely subjects for the franchise—pine trees more unlikely still. Again each individual is free to cast his vote so as to benefit sugar pines if that is his inclination. But many of the more extreme assertions that one hears from some conservationists amount to tacit assertions that they are specially appointed representatives of sugar pines, and hence that their preferences should be weighted more heavily than the preferences of other humans who do not enjoy equal rapport with "nature." The simplistic assertion that agricultural use of DDT must stop at once because it is harmful to penguins is of that type.

Fifth, if polar bears or pine trees or penguins, like men, are to be regarded as ends rather than means, if they are to count in our calculus of social

organization, someone must tell me how much each one counts, and someone must tell me how these life-forms are to be permitted to express their preferences, for I do not know either answer. If the answer is that certain people are to hold their proxies, then I want to know how those proxy-holders are to be selected: self-appointment does not seem workable to me.

Sixth, and by way of summary of all the foregoing, let me point out that the set of environmental issues under discussion—although they raise very complex technical questions of how to achieve any objective—ultimately raise a normative question: what ought we to do. Questions of ought are unique to the human mind and world—they are meaningless as applied to a nonhuman situation.

I reject the proposition that we ought to respect the “balance of nature” or to “preserve the environment” unless the reason for doing so, express or implied, is the benefit of man.

I reject the idea that there is a “right” or “morally correct” state of nature to which we should return. The word “nature” has no normative connotation. Was it “right” or “wrong” for the earth’s crust to heave in contortion and create mountains and seas? Was it “right” for the first amphibian to crawl up out of the primordial ooze? Was it “wrong” for plants to reproduce themselves and alter the atmospheric composition in favor of oxygen? For animals to alter the atmosphere in favor of carbon dioxide both by breathing oxygen and eating plants? No answers can be given to these questions because they are meaningless questions.

All this may seem obvious to the point of being tedious, but much of the present controversy over environment and pollution rests on tacit normative assumptions about just such nonnormative phenomena: that it is “wrong” to impair penguins with DDT, but not to slaughter cattle for prime rib roasts. That it is wrong to kill stands of sugar pines with industrial fumes, but not to cut sugar pines and build housing for the poor. Every man is entitled to his own preferred definition of Walden Pond, but there is no definition that has any moral superiority over another, except by reference to the selfish needs of the human race.

From the fact that there is no normative definition of the natural state, it follows that there is no normative definition of clean air or pure water—hence no definition of polluted air—or of pollution—except by reference to the needs of man. The “right” composition of the atmosphere is one which has some dust in it and some lead in it and some hydrogen sulfide in it—just those amounts that attend a sensibly organized society thoughtfully and knowledgeably pursuing the greatest possible satisfaction for its human members.

The first and most fundamental step toward solution of our environmental problems is a clear recognition that our objective is not pure air or water but rather some optimal state of pollution. That step immediately suggests the question: How do we define and attain the level of pollution that will yield the maximum possible amount of human satisfaction?

Low levels of pollution contribute to human satisfaction but so do food and shelter and education and music. To attain ever lower levels of pollution, we must pay the cost of having less of these other things. I contrast that view of the cost of pollution control with the more popular statement that pollution control will “cost” very large numbers of dollars. The popular statement is true in some senses, false in others; sorting out the true and false senses is of some importance. The first step in that sorting process is to achieve a clear understanding of the difference between dollars and resources. Resources are the wealth of our nation; dollars are merely claim checks upon those resources. Resources are of vital importance; dollars are comparatively trivial.

Four categories of resources are sufficient for our purposes: At any given time a nation, or a planet if you prefer, has a stock of labor, of technological skill, of capital goods, and of natural resources (such as mineral deposits, timber, water, land, etc.). These resources can be used in various combinations to yield goods and services of all kinds—in some limited quantity. The quantity will be larger if they are combined efficiently, smaller if combined inefficiently. But in either event the resource stock is limited, the goods and services that

they can be made to yield are limited; even the most efficient use of them will yield less than our population, in the aggregate, would like to have.

If one considers building a new dam, it is appropriate to say that it will be costly in the sense that it will require  $x$  hours of labor,  $y$  tons of steel and concrete, and  $z$  amount of capital goods. If these resources are devoted to the dam, then they cannot be used to build hospitals, fishing rods, schools, or electric can openers. That is the meaningful sense in which the dam is costly.

Quite apart from the very important question of how wisely we can combine our resources to produce goods and services, is the very different question of how they get distributed—who gets how many goods? Dollars constitute the claim checks which are distributed among people and which control their share of national output. Dollars are nearly valueless pieces of paper except to the extent that they do represent claim checks to some fraction of the output of goods and services. Viewed as claim checks, all the dollars outstanding during any period of time are worth, in the aggregate, the goods and services that are available to be claimed with them during that period—neither more nor less.

It is far easier to increase the supply of dollars than to increase the production of goods and services—printing dollars is easy. But printing more dollars doesn’t help because each dollar then simply becomes a claim to fewer goods, i.e., becomes worth less.

The point is this: many people fall into error upon hearing the statement that the decision to build a dam, or to clean up a river, will cost  $\$X$  million. It is regrettably easy to say: “It’s only money. This is a wealthy country, and we have lots of money.” But you cannot build a dam or clean a river with  $\$X$  million—unless you also have a match, you can’t even make a fire. One builds a dam or cleans a river by diverting labor and steel and trucks and factories from making one kind of goods to making another. The cost in dollars is merely a shorthand way of describing the extent of the diversion necessary. If we build a dam for  $\$X$  million, then we must recognize that we will have

$\$X$  million less housing and food and medical care and electric can openers as a result.

Similarly, the costs of controlling pollution are best expressed in terms of the other goods we will have to give up to do the job. This is not to say the job should not be done. Badly as we need more housing, more medical care, and more can openers, and more symphony orchestras, we could do with somewhat less of them, in my judgment at least, in exchange for somewhat cleaner air and rivers. But that is the nature of the trade-off, and analysis of the problem is advanced if that unpleasant reality is kept in mind. Once the trade-off relationship is clearly perceived, it is possible to state in a very general way what the optimal level of pollution is. I would state it as follows:

People enjoy watching penguins. They enjoy relatively clean air and smog-free vistas. Their health is improved by relatively clean water and air. Each of these benefits is a type of good or service. As a society we would be well advised to give up one washing machine if the resources that would have gone into that washing machine can yield greater human satisfaction when diverted into pollution control. We should give up one hospital if the resources thereby freed would yield more human satisfaction when devoted to elimination of noise in our cities. And so on, trade-off by trade-off, we should divert our productive capacities from the production of existing goods and services to the production of a cleaner, quieter, more pastoral nation up to—and no further than—the point at which we value more highly the next washing machine or hospital that we would have to do without than we value the next unit of environmental improvement that the diverted resources would create.

Now this proposition seems to me unassailable but so general and abstract as to be unhelpful—at least unadministerable in the form stated. It assumes we can measure in some way the incremental units of human satisfaction yielded by very different types of goods. . . . But I insist that the proposition stated describes the result for which we should be striving—and again, that it is always useful to know what your target is even if your weapons are too crude to score a bull’s eye.