

41. In his 1974 introduction, Bookchin traces his social analysis to Kropotkin, Mumford, and Paul Goodman. *Our Synthetic Environment*, p. lxxii.
42. Carson, address on receipt of the Schweitzer Medal of the Animal Welfare Institute, 7 January 1963. Quoted in Brooks, *The House of Life*, p. 316.
43. Bookchin, *Our Synthetic Environment*, pp. xviii–xix.
44. In his 1974 introduction, Bookchin has a clearer statement of what was only implicit in his original work. Environmental destruction is a “tendency inherent in the social system” of capitalism. It stems not from “moral delinquency” or even “greed,” but “from a market-oriented system in which everything is reduced to a commodity, in which everyone is reduced to a mere buyer or seller, and in which every economic dynamic centers on capital accumulation.” *Our Synthetic Environment*, p. xxxiii.
45. From Carson’s notes on her sources (284), I infer this to be the name of the chemical.
46. In its full context, this phrase might be read as ironic.
47. Here, too, I detect a possible irony in her use of “surely, only . . .”
48. See also her use of a shotgun metaphor (67), implying that imprecision is the problem.
49. Quoted in Graham, *Since Silent Spring*, pp. 13–14.
50. Fleming, “Roots of the New Conservation Movement,” p. 30.
51. Taylor, “Feminist Tales,” p. 542.
52. Jay Feldman, “Thirty Years after *Silent Spring*, the Choice is Clear,” *Global Pesticide Campaigner* 2, no. 4 (1992): 11–12.
53. A remarkably comprehensive analysis of this network is given in MacIntyre’s “Why Pesticides Received Extensive Use in America,” but he more or less brackets the “relatively fixed conditions of American political culture and market economy” (p. 575) that underlie the more proximal causes he discusses. It is precisely *Silent Spring*’s capacity to make inroads into these that is at issue.
54. For analyses of Carson’s impact, see the sources cited in MacIntyre, “Why Pesticides Received Extensive Use,” p. 551, n. 75, and anthologized in David Wade Chambers, ed., *Worm in the Bud: Case Study of the Pesticide Controversy* (Victoria, Australia: Deakin University Press, 1984).
55. More fundamentally, the very notion of “essentialism,” or at least its current functions as taboo and conversation stopper and its unproblematic opposition to constructionism, needs to be examined. See Diana Fuss, *Essentially Speaking: Feminism, Nature, and Difference* (New York: Routledge, 1989).
56. See Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper and Row, 1980).

Chapter Eleven

The Commoner–Ehrlich Debate: Environmentalism and the Politics of Survival

Andrew Feenberg

Introduction

Early environmentalists attempted to awaken concern about a wide range of problems, from pesticides to population control, without always discriminating priorities among them. The writers may have ranked the issues differently, but as members of a beleaguered minority dismissed as cranks by majority opinion, they rarely had the time or inclination for quarrels amongst themselves. As is often the case with stigmatized out-groups, harmony prevailed precisely in proportion to the burden of exclusion carried by those brave enough to join.

That happy state of affairs did not survive the success of the environmental movement in the early 1970s. Significant disagreements emerged which are reflected in the movement to this day. The first visible signs of the depth of the split appeared in 1971, as Paul Ehrlich and Barry Commoner debated the relative importance of population and pollution control.

Paul Ehrlich was not the first to discover the population explosion (that honor is usually granted Malthus) but he has done more than anyone else in the United States to spread the notion. A professor of population studies at Stanford University, Ehrlich has been a tireless Cassandra of demographic disaster. Books such as *The Population Bomb* and *How To Be a Survivor*, speeches on dozens of college campuses, and his campaign for zero population growth reached a wide audience and helped to make ecology a legitimate public issue. On the jacket of his latest book, no less than Albert Gore is among those

endorsing Ehrlich's work. Yet, Ehrlich's politics have always been ambiguous. By emphasizing population control as the key environmental issue, Ehrlich has identified himself with causes as diverse as no-growth ideology, Chinese population policy, New Left opposition to consumerism, and conservative attacks on Mexican immigration and high natality among minorities.

Barry Commoner is director of the Center for the Biology of Natural Systems at Queens College. He, too, began an intense campaign for the environment in the 1970s, culminating in his run for president on the Citizen's Party ticket in 1980. His 1971 bestseller, *The Closing Circle*, began a long polemic with the advocates of population control by arguing for a class politics of the environment. He soon became the chief public advocate of environmental socialism. Today he plays a leading role in the National Toxics Campaign. One aspect of his program, the emphasis on technical change, has become standard fare in the environmental movement.

The Commoner-Ehrlich debate quickly moved beyond scientific disagreement to embrace two radically different rhetorics and strategies. Their argument, which took place at the very beginning of widespread public concern over the environment, adumbrated the main themes of later controversies over humanism and antihumanism, democracy and dictatorship, and North/South disputes. These themes are reflected today in the very different emphases of deep ecologists (such as Earth First!) and environmentally conscious trade unions (such as the Oil, Chemical, and Atomic Workers). In Germany, some of the same disagreements were reflected in the split within the Green Party between the "Fundis" and the "Realos," the former demanding an end to industrial and population growth while the latter pursued red-green alliances with labor to reform industrialism.

Thus Ehrlich and Commoner did indeed prove to be prophets, but not so much of the environment as of controversies in the movement to save it. In this paper, I review their early debate and some of their more recent positions with a view to gaining historical perspective.¹

An End to History

There is something surprising about these disagreements. After all, scientists are supposed to be better at building consensus than the rest of us. However, there is a significant precedent for the conflict over environmentalism: the scientists' movement for nuclear disarmament that followed World War II. That experience is especially relevant to environmental debates because leading environmentalists participated in it while others imitated it, consciously or unconsciously. Ehrlich, for example, attempted to give environmentalism some of the trappings of the postwar scientists' movement, as is apparent from the title of his 1968 bestseller, *The Population Bomb*. (His

most recent book is called *The Population Explosion*.) In fact, he won the sympathy of the *Bulletin of the Atomic Scientists*, founded in 1945 to work for public understanding of the nuclear threat. Commoner had been an activist in the original scientists' movement as a senatorial assistant after the war who went on to fight for the Nuclear Test Ban Treaty and founded a journal called *Nuclear Information*. While Ehrlich attempted to revive something resembling the old scientists' movement on the basis of an apocalyptic rhetoric designed to strengthen the political authority of science, Commoner moved to a very different position.

The original scientists' movement arose from the anguished realization that the creation of the atomic bomb contradicted the supposedly humanitarian mission of research. Yet, the very fact that science had proved itself capable of such a feat promised scientists a larger voice in the disposition of the forces they had unleashed than they had ever enjoyed as benefactors of humankind. The opportunity to speak with new authority was immediately seized by scientists involved in the Manhattan Project.²

Physicists, many of whom had been sympathetic to socialism during the depression, quickly dropped public concern for class issues and set themselves up as spokesmen for science, a new force in human affairs with as yet unsuspected promise and power. The new scientific statesmanship hoped to gain a hearing by emphasizing the apocalyptic nature of the forces science had unleashed; calling on the human species to address the issue of survival; subordinating all particular individual, social, and national interests to this larger issue; and organizing a unanimous front of scientists to put the new authority of research to good use.

The scientists' movement brought a fear and a hope: the fear of the mortality of the human species, and the hope of a world government and end to the use of force in the affairs of nations as the only adequate response to the dangers of the nuclear age. Some suggested that all nuclear secrets be immediately shared with the Soviet Union as a quid pro quo for Soviet renunciation of the bomb. Others wanted the United States to surrender its nuclear arsenal to the United Nations, and to renounce further research on and production of such weapons. (A generation earlier, Nobel had similarly imagined that the discovery of the awful weapon dynamite would finally put an end to war.)

Of course, none of this occurred. Instead, cold war competition between the Soviet Union and the United States began surreptitiously in Hiroshima, and since then we have all grown accustomed to living under a nuclear sword of Damocles. It soon became clear that far from resolving world problems, the fear of nuclear destruction simply changed the stakes of the contest.

With ecology, the biological sciences are now supposed to open an escape hatch from the divisions of nation and class which drive human history. Like a natural disaster of planetary scope, the environmental crisis could unify humankind beyond historic rivalries in a more fundamental confrontation with

nature itself. Accordingly, the environmental movement began as a politics of species survival, frightening people onto the common ground of a “no deposit, no return” world, but not surprisingly, the same old shit of history reappeared as a division within the environmental consensus. The millennial conflict of rich and poor invaded the common ground of the environment as it has every similar locale on which humanity has attempted to set up camp.

The Commoner–Ehrlich Debate

The scientific substance of the ecological debate concerns the causes of and solution to the environmental crisis. On the cause, experts are divided: some (like Ehrlich) asserting that the principal source of the crisis is overpopulation, others (like Commoner) blaming it on polluting technologies. The first argue that “the causal chain of deterioration is easily followed to its source. Too many cars, too many factories, too much pesticide, . . . too little water, too much carbon dioxide—all can be traced easily to *too many people*.”³ The second protest that “environmental degradation is not simply the outcome of some general expansive process, growth of population, or demand for goods, but of certain very specific changes in the ways goods are produced which are themselves governed by powerful economic and political considerations.”⁴

On the solution, the same division appears, reflecting radically opposed policies corresponding to different class and national interests. Not surprisingly, those most concerned about the exhaustion of resources are the prosperous nations and social strata that consume such disproportionate quantities of them. Accordingly, they advocate controls over population and economic growth. On the other side, those principally concerned about polluting technologies worry most about the exhaustion of “garbage dumps” which they, too, claim is upon us. It is to be expected that the poor, who hope to gain from economic growth but who in the meantime cannot easily escape the health hazards and pollution with which it is associated, should be most attracted to theories that criticize not growth per se but its unintended consequences.

At first sight, this disagreement may seem artificial. Surely exponential growth in population must slow and stop before it destroys both the ecosystem and society, and it is equally indisputable that current industrial technology is dangerously unsound. Whatever the *main* source of the problem, certainly both population pressure and polluting technologies are contributing causes. Why can't slowing birth rates and changing technologies complement each other?

Ehrlich, whose whole strategy rested on augmenting the authority of the scientific community to the measure of the crisis it identified, was particularly anxious to preserve a united front of scientific opinion. He therefore proposed a public compromise with Commoner while, behind the scenes, the scientists could sort out their technical disagreements in their own good time. Ehrlich

wrote, “We have made several personal attempts to persuade Commoner to avoid a debate on which factor in the environmental crisis is ‘most important.’ We felt that such a debate would be counterproductive for the goals which we all share. Unhappily, however, he has persisted in carrying out a campaign, both in speeches and the popular media, to dismiss the roles of population growth and affluence, and place the blame entirely on ‘faulty technology.’”⁵

Ehrlich's complaint was overstated, but it is true that Commoner chose to polarize the issue. Why did he persist, in Ehrlich's terms, in “splitting the environmental movement?” In Commoner's words, there is “more than logic and ecology at work here.” If the debate heats up, it is because human survival is a political issue; we are all concerned, but not all in the same way. As Commoner put it:

There is a tendency, in some quarters, to treat the environmental crisis as though it were an issue in which everybody wins—whether rich or poor, worker or entrepreneur. Do the data on the United States situation support this view? Is it in fact true that environmental improvement is a good so universal in its value that it can override vested interests that contend so bitterly over other issues—such as jobs? The answer, I am convinced, is no. There is usually no way to work out an even-handed distribution of the cost of environmental improvement; something has to give.⁶

In sum, Commoner rejected the idea of a universal interest in survival around which the human race could unite. Ultimately, the policy issues that divide environmentalists correspond to class lines in what is essentially a new terrain for an old struggle.

THE BIOLOGICAL OR THE SOCIAL

Underlying the debate over the relative impact of overpopulation and polluting technology is the question of the relative significance of biological and social factors in causing environmental problems. For Ehrlich, the “population bomb” involves a biological process, human reproduction, gone completely out of control. For Commoner, environmental problems of all sorts, including overpopulation, are effects of social causes inherent in capitalism and colonialism.

Ehrlich's views have the virtue of being simple, clear, and easy to dramatize. Like any other exponential curve in a finite environment, that which traces the population explosion must finally level off. “Basically, then, there are only two kinds of solutions to the population problem. One is a ‘birth rate solution,’ in which we find ways to lower the birth rate. The other is a ‘death rate solution,’ in which ways to raise the death rate—war, famine, pestilence—find us.”⁷

Writing in 1968, Ehrlich argued that the latter process had already begun.

He suggested three likely futures for the human race over the coming decades. His most optimistic projection included the death of "only" 500 million people in a ten-year "die-back" to a new balance of population and resources. This conclusion followed from Ehrlich's belief that in 1958, "the stork passed the plow" in the developing countries; the biological limits of agricultural production having been reached, the future looked grim. With disaster on the way, Ehrlich wondered whether after the "time of famines," the human race would be able finally to achieve a "birth rate solution" to its problems. He argued that human society could be saved only by a combination of moral, financial, and especially coercive legal incentives, applied on an international scale by the United States or a world government.

In sum, as a Malthusian, Ehrlich emphasized the objective, natural limits of the biosphere, or the absolute scarcities which confront the human race. His work popularized this approach, which quickly found echoes in a whole line of proclamations and essays announcing a new age of limits.

In 1972, the Club of Rome released a frightening doomsday study, concluding that "the basic mode of the world system is exponential growth of population and capital, followed by collapse."⁸ *The Limits to Growth* predicted that rising population and industrial capacity would lead to increased demand for ever scarcer raw materials. Left to its own devices, within a century world industry would be spending so much money on these increasingly costly resources that it would be unable to renew depreciated capital. Finally, the industrial base would collapse along with services and agriculture, causing a drastic drop in population as the human race returned to barbarism. Was the modern industrial system destined to be a brief and tragically flawed experiment rather than the triumphant apotheosis of the species?

At about the same time in England, *A Blueprint for Survival*, prepared in 1972 by the editors of *The Ecologist* and endorsed by thirty-three leading scientists, called on Britons to slow their economic growth and halve their population to avoid "the breakdown of society and irreversible disruption of the life-support systems on this planet."⁹

Still more radical were arguments by Robert Heilbroner, who foresaw the end of liberal democracy as the turbulent era of environmental crisis brought out authoritarian tendencies in the human personality. "From the facts of population pressure," he writes in retrospect, "I inferred the rise of 'military-socialist' governments as the only kinds of regimes capable of establishing viable economic and social systems."¹⁰ Retribalization appealed to him as a long-term alternative to a fatally flawed industrialism.¹¹

The continuity with present positions is clear, although some recent debates carry us well beyond even the wildest speculations of the 1970s to the very borderline of madness. For example, the *Earth First! Journal* once published a discussion of the beneficial environmental effects of AIDS. One anonymous author wrote, "If radical environmentalists were to invent a disease to bring

human population back to ecological sanity, it would probably be something like AIDS. As radical environmentalists, we can see AIDS not as a problem, but as a necessary solution (one you probably wouldn't want to try yourself)."¹²

Ehrlich's most recent book is far more moderate, perhaps in tacit recognition of the failure of his earlier alarmist predictions. (I say "tacit" because, rather surprisingly, despite the enormity of the errors in his earlier estimates of food and resource limits, he writes as though *The Population Bomb* has been confirmed on the whole by events.) He no longer emphasizes overpopulation exclusively or endorses coercive population control. Yet, population politics continues to be his central concern. After discussing the many sources of environmental catastrophe, he concludes, "Ending population growth and starting a slow decline is not a panacea; it would primarily provide humanity with the opportunity of solving its other problems."¹³

In contrast, Commoner holds that the environmental crisis, including the population problem, is due primarily to social causes rather than natural limits, for which a social solution is appropriate. The difference between his position and Ehrlich's can be clearly stated in terms of a formula Ehrlich himself devised for calculating environmental impact as a product of population size, affluence (that is, the amount of goods per capita), and the propensity of technology to pollute. Ehrlich, who assumed that the first was decisive, concluded that pollution derived ultimately from overpopulation. Commoner, however, argued from a close study of the relative impacts of the three factors that "most of the sharp increases in pollution levels [was] due not so much to population or affluence as to changes in productive technology."¹⁴ "Population growth in the United States has only a minor influence on the intensification of environmental pollution."¹⁵

In support of his conclusion, Commoner noted that there was a manifold increase in U.S. pollution in the twenty years between 1946 and 1966, while population went up only 42 percent. He argued that not population growth, but the massive transformation of industrial and agricultural technology after World War II was the main cause of rising pollution. "Productive technologies with intense impacts on the environment have displaced less destructive ones," for example, substitution of detergents for soap; synthetic fibers for cotton and wool; increased use of aluminum, air conditioners, more and more powerful automobiles; escalating use of fertilizers and pesticides.¹⁶ The result of these changes was an immense increase in the environmental impact of modern societies, to the point where we now can foresee a breakdown of those biological processes which have continuously renewed the air, soil, and water for millions of years.¹⁷

What needed to be done? Commoner proposed transforming modern technology "to meet the inescapable demands of the ecosystem."¹⁸ He placed a price tag on this program, and a high one at that, estimating that "most of the nation's resources for capital investment would need to be engaged in the

task of ecological reconstruction for at least a generation."¹⁹ Was this realistically possible? Commoner countered the sceptics by arguing that "no economic system can be regarded as stable if its operation strongly violates the principles of ecology."²⁰ In *The Closing Circle*, he showed that under capitalism, it is the search for maximum profits that motivates introduction of the new, dirtier production methods that have caused the environmental crisis.

For many years, in numerous articles and books, Commoner has argued that only a democratic socialist system can address environmental problems effectively. His latest book, like Ehrlich's, is somewhat more cautious. He still believes that the pursuit of short-term profits motivates bad technical decisions and, after the experience of the last twenty years, he is more convinced than ever that mere tinkering with pollution controls is insufficient. Instead, environmentally unsound technologies should be abolished outright and replaced with better ones.

However, Commoner has been chastened by the fall of communism in the Soviet Union and Eastern Europe and the breakdown of old assumptions about planning and markets that, like most leftists, he took for granted in earlier days. Now he writes that the market "is a useful means of facilitating the flow of goods from producer to consumer; but it becomes a social evil when it is allowed to govern the technology of production."²¹ Like many socialists today, Commoner is looking for new solutions.

THE QUESTION OF DIMINISHING RETURNS

Now the political stakes in the debate are clear. Behind the contention over scientific issues, dispute over resource depletion and environmental degradation, and methodological disagreement over the biological or social character of the factors leading to crisis lies, quite simply, the old debate over capitalism and socialism. Was Commoner right to link the fresh new environmental movement with the tired old struggle for socialism? After all, environmental problems appear to be indifferent to socioeconomic systems. Commoner's critics saw little more than outmoded demography in his attempt to Marxify ecology. Ehrlich was particularly disturbed; he feared that Commoner's politics would shatter the unity (beyond class and ideology) of his movement for survival. As he put it, "There is no point in waving a red flag in front of the bulls."²²

Ehrlich claimed that Commoner's politics was based on bad science.²³ Commoner was supposed to have underestimated the significance of population growth because he ignored the nonlinear relation between population size and pollution. Under the "law of diminishing returns," small increases in population might be responsible for disproportionately large increases in pollution. Commoner, he charged, crudely compared a small population increase with a large pollution increase and concluded that other factors must be

decisive. In fact, the variables might interact in such a way that even a mere 42 percent increase in population could cause the manyfold increase in pollution cited by Commoner.

Take the case of food production. High levels of productivity may be obtained from good soil with only a little fertilizer, but there is only so much good soil. Once population grows beyond certain limits, farmers are compelled to plant mediocre soil in order to produce food for everyone. At this point, fertilizer use increases dramatically as attempts are made to prime bad land into giving reasonable yields. With increased fertilizer use comes increased water pollution. This, according to Ehrlich, is precisely what has happened in the United States.

Ehrlich's method was similar to that of *The Limits to Growth*. First, a natural limit on a presumably unsubstitutable resource is postulated, then a level of per capita demand is assumed and multiplied by actual and projected population size. As exhaustion of the resource approaches, efficiency declines, costs rise, and eventually the very survival of the population dependent on it is threatened.

Commoner replied that the problem of diminishing returns was simply irrelevant to major technological developments since World War II. In practice, returns "diminish" less for environmental than for economic reasons, reflecting not natural-resource limits but socially relative mechanisms of accounting and pricing. In Ehrlich's example, what *compels* the farmer to use excessive fertilizer? Certainly not absolute scarcity of land; at the time of the debate, there was still plenty of good land left in the United States, but the government actually paid farmers *not* to use it in order to maintain farm prices. This compelled farmers to push land in use to the limits of its capacity in order to make a profit. At those limits, something like a problem of diminishing returns occurs as ever greater increments of fertilizer are required to produce a constant increase in soil productivity, but this problem is strictly attributable to social causes which restrict planted acreage while requiring an increasing yield.

On balance, Commoner seems to get the better of this argument. It is, of course, possible to construct ideal models of the "world system" in which everything is held constant while population and resources are extrapolated to an inevitable clash, but this is not the real world, in which limits are relative to a multiplicity of factors. In the case of food, for example, in addition to limits on production there are losses of farm land due to urbanization; desertification due to bad agricultural practice; the inefficiency of culturally preferred high-protein diets; the voracious appetites of billions of pets whose owners can better afford to feed them than certain nations can afford to feed themselves; fertilizer costs which rise with artificial oil prices; and war and social disorganization in numerous Third World countries.

This crucial issue continues to divide Ehrlich and Commoner over twenty

years after their original debate. Ehrlich still argues that overpopulation is at work in a wide variety of environmental problems and, for the most part, Commoner ignores the issue on the same grounds as before.

Ehrlich now defines overpopulation as an excess of inhabitants over the carrying capacity of the land they inhabit. No absolute limit exists to the number of people a given territory can support; environmental impact is relative to affluence and technology as well as human numbers. However, Ehrlich criticizes those such as Commoner who emphasize the possibility of accommodating larger numbers with improved technology; "overpopulation is defined by the animals that occupy the turf, behaving as they naturally behave, not by a hypothetical group that might be substituted for them."²⁴

Fair enough, but Ehrlich frequently ignores the disproportionate impact of the sort of basic technological change Commoner advocates, while treating population control as the obvious solution to the problem of overpopulation. He relies once again on the supposed non-linear relation between population and pollution to explain why small reductions in population should have significant beneficial impacts. Once again we hear about diminishing returns without the evidence that would convince us that population control is really crucial to addressing environmental problems.²⁵

Ehrlich's definition of overpopulation and the diminishing returns hypothesis work together to depoliticize environmental issues. He wants to argue for a politics of survival beyond considerations of class and national interest, but in fact he presupposes a specific constellation of class and national interests, that of modern capitalism and neoimperialism: "the animals that occupy the turf, behaving as they naturally behave." This is why he ends up seeking a biological solution. Although there are flaws in his approach that will be discussed later, Commoner achieves a more realistic assessment of the problems with a more socially conscious method.

THE PERSONAL OR THE POLITICAL

A method which treats society as a thing of nature, fixed and unalterable, ends by treating nature as a social object wherever it is subject to direct, conscious control. In the case of population politics, the biological locus of control is human reproduction, which individuals and governments can manipulate through voluntary contraception and involuntary sterilization.

By contrast, a method which emphasizes the social sources of the problems will prefer to act on the biological mediations indirectly through the forces governing institutional and mass behavior. Although the intended result may be the same—a better proportion between population and resources and a less polluting society, the means to the end will be quite different.

From a purely *technical* point of view, rapid, drastic and necessarily coercive reduction in the number of people is environmentally equivalent to changing

the technology used by a much larger population. For example, Los Angeles's smog could be halved by halving its population (hence automobile use), but the same result also could be achieved at present population levels by halving emissions from the cars in use or by substituting mass transit for cars. Even though the environmental result is similar in these cases, there is no *moral* equivalence between two such very different policies as requiring smog-control devices on cars or legally limiting families to a single child.

This issue goes beyond the environmental question. Ehrlich claimed that growing population causes "not just garbage in our environment, but overcrowded highways, burgeoning slums, deteriorating school systems, rising crime rates, and other related problems."²⁶ Thus, zero population growth might help to stem the tide of urban blight, poverty, crime, and riots. Commoner did not deny that crowding can intensify social problems, but he argued that they demand a more radical solution than an end to crowding, namely, the elimination of the social conditions from which they arise. "To the degree that population size is reduced, to that degree may we be able to tolerate some of the technological, economic, and social faults that plague us; to the degree that we repair these faults, to that degree can the nation successfully support a growing population."²⁷

Commoner concluded that the choice between these two routes is "a political one which reflects one's view of the relative importance of social control over personal acts and social processes."²⁸ Here is the nub of the disagreement. When the emphasis is placed on population, "social control over personal acts" appears as the solution. This approach is at once more individualistic and more repressive than emphasizing reform of the social processes which, Commoner claimed, ultimately determine both birth rates and technological choices.

Indeed, the dilemma of population politics is the absence of any significant realm of action other than appeals to individual conscience and coercion by the state. There is not much else to be done at the political level except attacking public opponents of birth control and lobbying for repressive legislation. One cannot very well demonstrate against babies or even against parents. Unless the state intervenes (as it has in China), the issue is private, each couple choosing how many children it wants as a function of its own values. This explains why Ehrlich's political program wavered between moralistic voluntarism and more or less harsh state action.²⁹ The resulting strategy offered a way in which without exercising social control over social processes, people could nevertheless mitigate the effects of an ecologically unsound technology by personally shouldering the burden and the costs.

The significance of the debate now becomes clear. In Commoner's words, people may choose a "new ecology-minded personal life-style . . . designed to minimize the two factors that intensify pollution that are under personal control: consumption and population size."³⁰ Or, "insofar as [they] are unwilling

to undertake this personal action, they will need to seek relief by altering the economic, social and political priorities that govern the disposition of the nation's resources.³¹ Commoner himself chose political rather than personal action, control over institutions rather than individuals.

Is a synthesis impossible? Can we not at the very least exercise voluntary control over personal behavior as well as political control over institutions? Ehrlich attempted just such a synthesis of the personal and the political in his 1971 book, *How To Be a Survivor*. There he broadened his approach to include not only population control, but egalitarian social reform, anti-imperialism, technological reform, and reduction through "de-development" of the excessively high living standard of the "over-developed" countries.

But synthesis is not so easy; divisive class and national issues cut directly across it, revealing it to be an eclectic combination of opposing strategies. For example, it must have been difficult to approach workers and the poor with a slogan such as, "Try to live below your means! It will be good for your family's economic situation, and it may also help to save the world."³² In a society based on economic inequality, one cannot hope to organize a strong political movement around voluntary self-deprivation. The alternative, invoking the power of the state, usually has not served higher moral ends, but rather the interests of economic and political elites.

Meanwhile, business opposed much of Ehrlich's program. At first it felt threatened by the environmental issue, and its initial strategy consisted in distracting people from a crisis in which it did not believe or in ridiculing the proponents of environmental regulation. One mainstream commentator wrote sceptically on *The Limits to Growth*, "Conceivably, if you believe their predictions of extremely short time spans before the exhaustion of resources, there are many speculative killings to be made."³³

Then, in 1971, the American Can Company extended its antilittering campaign to take in the whole environmental crisis. Keep America Beautiful, Inc. proclaimed: "People start pollution. People can stop it." Hundreds of millions of dollars of free advertising space were devoted to diverting environmental pressures away from business and toward individual action. This campaign was largely successful. Soon the public agreed with Pogo, the comic-strip character who said, "We have met the enemy and he is us."³⁴

The businessmen who sponsored this campaign, and President Nixon who praised their civic consciousness, had no illusions about the implications of the environmental movement. They did not believe that it promised a universal good in which all could share equally. Rather, their hope was clearly that the political energy mobilized by the increasingly articulate critics of capitalist environmental practice could be focused on private options, leaving the basic economic institutions unchanged. Indeed, not only unchanged, but in a position to cash in on those great "speculative killings" in which, by this time, quite a few informed investors had come to believe.³⁵

This anecdote suggests the divisive potential of the environmental crisis. Early in this discussion Commoner was quoted as saying, "Something has to give." The question is what, how, and why? This is the question I shall try to answer in the remainder of this essay through a discussion of the relevance of class, race, and national divisions to environmental policy.

Class Struggle Revisited

It should be clear by now that Commoner *wanted* the environmental movement to be "progressive" in the traditional sense of the term. He hoped it would become a factor in the struggle not only for nature but also for human beings, not only for survival but also for a more egalitarian society. Commoner had to prove that his radicalism was not gratuitous and that the allies he had chosen were indeed those most likely to work for environmental reform.

Commoner's argument is that pollution is a major short-term cost-cutter. During an initial "free period" in which the environment tolerates degradation:

Pollutants accumulate in the ecosystem or in a victim's body, but not all the resultant costs are immediately felt. Part of the value represented by the free abuse of the environment is available to mitigate the economic conflict between capital and labor. The benefit *appears* to accrue to both parties and the conflict between them is reduced. But in fact pollution represents a debt to nature that must be repaid. Later, when the environmental bill is paid, it is met by labor more than by capital; the buffer is suddenly removed and conflict between these two economic sectors is revealed in full force.³⁶

Thus, environmental politics is a zero-sum game in which the distribution of costs affects classes differently according to their position in the economic system. Starting from this premise, Commoner constructed what are, in effect, ideal-typical models of class-determined attitudes toward the environment.

The capitalist's relation to the environment is shaped by his short-term focus on profits and his ability to shift costs away from himself onto others. Pollution appears as an externality in his calculations, an externality suffered largely by others because he has the means to escape its worst effects privately (for example, by buying air-conditioning for his house and car, living in the suburbs or the country, or vacationing in unspoiled regions). Since environmental constraints often conflict with popular marketing strategies (such as increasing automotive horsepower) or threaten potentially profitable investment opportunities, capitalists will resist environmental controls until they become unavoidable, then attempt to get others to bear the burden. Commoner's theoretical prediction has been a fairly good description of business attitudes in the United States.

Workers' objective position with respect to the environment is quite

different because for them, pollution is not an exogenous but an endogenous factor. Workers in the plant suffer the effects of pollution far more than executives in their air-conditioned administrative offices. Even during the "free period," workers and the poor "pay" for pollution through inconvenience and disease and as their "costs" rise, the issue is brought home in their daily lives. Here is the vital difference between the lower and upper classes in their relation to environmental degradation.

It was also the basis for Commoner's faith that workers, or at least their unions, eventually would lead militant opposition to environmental degradation. "The need for a new alliance is clear. Neither worker nor environmentalist can reach their separate goals without joining in a common one: to reconstruct the nation's productive system so that it conforms to the imperatives of the environment which supports it, meets the needs of the workers who operate it, and secures the future of the people who have built it."³⁷

While Commoner offered good reasons for labor to become active in the environmental movement, today it is obvious that he overlooked the ambiguity of labor's situation. As he suggested, labor may fight to ensure that the burden of environmental restoration is shared more fairly by improving the conditions under which workers work and live. However, labor also can resist the unequal burden of capitalist environmentalism by resisting all environmental expenditures, shortsighted though that may be.

When he wrote *The Closing Circle*, Commoner was convinced that the intensified class conflict generated by the ecological crisis would be the greatest school in environmental policy that ever was. He believed that in this school, workers would learn to understand the economic mechanisms which cause the crisis and to reject equally the arguments of those who dismiss environmentalism and those who attempt to turn it into an issue of individual morality. In fact, labor environmentalism never played the central role he predicted. The failure of his strategy raises serious questions about his whole approach.

CULTURE AND CONSCIOUSNESS

The most obvious problem is his reliance on the traditional Marxist theory of class consciousness. One simply cannot predict the future beliefs of a class from their objective interests. The social theorist must explain the specific political and cultural factors that might, in any given case, distinguish the real consciousness of classes from the rational model constructed in theory, but Commoner omitted this second level of analysis, that of political and cultural mediations. The problem is especially serious because his theory of the environmental crisis hovered on the verge of a type of cultural criticism he himself did not wish to develop. He was so busy with his polemic against individualistic environmentalism that he rejected concern with culture which, he seemed to fear, would lead back to lifestyle politics.

However, the changes in production for which Commoner called amounted to far more than the American Way of Life equipped with emission controls; they presupposed radical cultural changes. The closest he came to facing this problem in the early seventies was in discussion of the distinction between the formal measures of "affluence," such as GNP, and the actual goods and services enjoyed by individuals. The good the consumer seeks, he argued, may be obtained in a variety of forms with very different environmental impacts.³⁸ What is at stake in such a distinction? Commoner noted that many older materials and technologies such as soap, wood, and bottles were displaced after World War II by more profitable substitutes such as detergents, plastics, and cans. Clearly, the return to capital would be affected by environmental restoration, but if consumers could obtain the same good in the old form, then they might actually benefit from technological "regression."

However, the matter is considerably more complex than this simple picture. First, the older technologies are more labor intensive which suggests that labor, too, may have an interest in the application of new technologies to the extent that they increase productivity. Commoner discounted a large part of the increased welfare that workers are supposed to derive from such productivity increases, but in the final analysis the issue is not merely quantitative. Note, for example, his response to a question during testimony in House hearings on fuel and energy: "If you have followed the situation in some of the automobile plants in the last year or so, you probably realize that we may be reaching the human limit of automation. I think new ways of using human labor in a humane way ought to be looked into. In short, we should question the value of continued replacement of people by electronics."³⁹ Clearly, he was attempting to conjoin the environmental movement with a critical challenge to central values of capitalist culture, for both capitalists and workers.

Second, the resubstitutions for which Commoner called would change the form in which consumers obtained familiar goods. For example, he did not oppose individuals achieving a high level of geographical mobility in their daily lives; he just wanted them to do so through less polluting and wasteful means than the private automobile.

However, utilitarian considerations have little to do with the choice of the form in which goods are delivered in a modern consumer society. As is evident in advertising, forms are invested with meanings that often are wholly unrelated to the ostensible purposes of the goods they adorn, but that are nevertheless compelling for consumers. The sexual and status advantages of automobile ownership, while doubtless less important than the transportation it provides, are not trivial. They would be lost in the switchover to mass transit, a spare and utilitarian alternative by comparison. This fact in itself constitutes a significant cultural barrier to the changes Commoner advocated, but he had no way to discuss it because he worked exclusively at the level of imputed interests in abstract goods.⁴⁰

This placed Commoner in a serious dilemma. As a Marxist, he rejected the sort of appeal to moral renunciation in which his adversaries specialized and attempted to attach environmentalism to the actual interests of the mass of humankind. However, the logic of Commoner's attack on capitalism led him to question its model of welfare and suggest an alternative that was not supported by the everyday consciousness of any group in the society. What was at issue, then, in Commoner's program was actually a radical change in the economic culture of capitalist societies, not just an environmentally sound version of it.

How much difference would there really be between Commoner's position, with its problematic connection to the real consciousness of workers, and a moral position that pretends to no such relation at all? This is a difficult question. To preserve the difference it would be necessary to theorize a process of cultural change that pointed the way toward a model of welfare more consonant with environmental survival than the current one. In these terms, it might still be possible to argue for a relationship between environmentalism and real (future) interests.

This is no merely verbal point. Where a clean and healthful environment is considered not as an exogenous dumping ground but as a component of individual well-being, different environmental practices would be followed spontaneously by the individuals in their pursuit of welfare and would not have to be imposed on them by market incentives or by political or moral coercion in opposition to their own perceived interests. Since technology is routinely adapted to changing social and economic conditions, there is no reason in principle that it should not be redesigned to conform to the requirements of such a culture.⁴¹

What is needed then is not a theory of individual lifestyle or simply of social control over production, but also of the processes of cultural change. Commoner was trapped in an overly rationalistic model that relied exclusively on scientific persuasion (at which, it should be said, he is very good). His adversaries meanwhile seized on all the symbolic machinery of environmental consciousness raising and turned it to account in pursuit of policies he deplored.

Of course, Commoner was right to reject the exaggerated environmental role they attributed to lifestyle politics, but personal involvement in environmentalism (through gestures such as participating in recycling or conserving water) is among the most effective means of cultural change available to the environmental movement, no matter what its policies or class content. Even if these gestures have a limited impact on the environment, they change people in ways that favor all forms of environmentalism and must not be rejected or ignored because they may be accommodated to reactionary policies. Significantly, as Commoner has become involved with movements against toxics and for recycling, he, too, has come to recognize the importance of voluntarism in

the environmental movement (not, of course, for the sake of self-imposed poverty, but as a factor in technological change).

THE LIMITS OF MORALITY

Where did Ehrlich stand on these issues? The answer to this question is not at all clear. He claimed to seek a coalition based on those with "a stronger interest in survival than in perpetuating over-consumption."⁴² Thus, the politics of ecology would appear to be sited in a world of overconsumers, some of whom are sufficiently enlightened to renounce their excesses for the sake of ultimate survival. But what of all the underconsumers for whom this dilemma does not exist? Do they have no place in a middle-class environmental movement?

It was by no means Ehrlich's intention to exclude them. His conception of the political base of the environmental movement was somewhat vague, but it was not exclusionary. "All Americans must be recruited into the de-development program; all must be assured of sharing the fruits of success. Those who have been effectively excluded from our society will surely block our attempts to save it—unless the doors are opened to them."⁴³ Ehrlich thus called for egalitarian reform of American society.

It is important to clarify the distinction between this approach and Commoner's. Commoner envisaged a resolution to the environmental crisis not through restrictions in the supply of material goods, but rather through changes in the definition and delivery of those goods. These changes would involve a shift between similar rewards offered in one or another form and, to some extent, a new perception of rewards where goods now go unnoticed and unappropriated (for example, in the case of clean air or water). Thus, Commoner remained within the traditional progressive framework. Ehrlich suggested a shift in the scene of fulfillment, from the material or economic domain to the spiritual or ideological domain. The difference is considerable since the primary cultural impulses of this society orient individuals toward the spontaneous pursuit of material ends, while spiritual ends must be imposed or self-imposed by law or morality in opposition to the individual's perceived interests.⁴⁴

Two consequences follow from this distinction. First, Ehrlich's position was based on the universality of the current concept of affluence. He rejected Commoner's distinction between the actual economic good that individuals pursue and the form in which it is delivered to them by the dominant technology. Ehrlich called this "redefining affluence," and in rejecting it, he fell into uncritical acceptance of the dominant model of welfare.⁴⁵

This model is presupposed by Ehrlich, the authors of *Limits to Growth*, Heilbroner, and others. For them, the environmental limits of what we currently understand as welfare are formulated as absolute limits on material

progress as such. If contemporary ideas of wealth are in fact universal, then all adjustments to environmental constraints appear as economic regression. Far from identifying the actual, natural limits of the world system, this position only establishes the limits of a given type of capitalist economic culture, which it defends against environmental obsolescence through a larger provision of spiritual compensations.

This form of environmentalism leads inexorably from moral self-control to legal coercion. As Saint Paul wrote long ago, mankind is damned, not saved by the (moral) Law. The very need for self-control is a tribute to the power of temptation and the likelihood of sin. That which can be accomplished only against the material impulses of the species, surely will not be accomplished in the finite timespans of political action by the simple appeal to morality. Lurking in the wings is always the recourse to legal coercion or the power of the state (which, in Heilbroner's *The Human Prospect*, is explicitly charged with the salvation of the species). Here, the extreme consequence of the initial ideological choice is clearly drawn. The price of the perpetual maintenance of capitalist economic culture in a world where it has become environmentally absurd is a forced regression backward along the continuum of freedom and satisfaction.

Ehrlich's most recent book is not so ready to jettison democracy, but it is still confused on the question of affluence. At one point he indexes it to consumption while at another, he asserts that quality of life is independent of consumption and relative to the value of the actual goods delivered by it. This latter position is perilously close to the one he rejected as "redefining affluence" in his debate with Commoner. Now he advocates both reducing consumption and reducing the environmental impact of the technologies that provide consumer goods, both renouncing economic growth and changing production technology to accommodate environmentally sound development.⁴⁶ Ehrlich never succeeds in focusing the issue clearly or addressing the choices it implies.

We have arrived back at Commoner's original premise. The environmental movement must choose between a repressive policy of increasing control over individuals or a democratic policy of control over the social processes of production (and, I would add, culture.) The first choice suggests that the existing production system can be preserved, along with all its injustices, for a prolonged period in spite of the environmental crisis. The second choice suggests that the production system must be radically changed.

Race and Nation

Ehrlich's eclectic strategy was supposed to involve "everyone" in the work of environmental salvation, but his coalition got off to a bad start in at least

one important respect. African Americans rejected zero population growth, which many saw as a racist attack on their survival.

Ehrlich denied that his movement was based on a specific class of prosperous, well-educated whites anxious to shift the ecological burden to poor blacks. He proposed, for example, that a "baby tax" he favored to discourage reproduction be accompanied by special exemptions for minorities. "The best way to avoid any hint of genocide is to control the population of the dominant group."⁴⁷ Why was the zero population growth movement still unable to attract African Americans? Perhaps part of the answer is to be sought in this newspaper advertisement for birth control: "Our city slums are packed with youngsters—thousands of them idle, victims of discontent and drug addiction. And millions more will pour into the streets in the next few years at the present rate of procreation. You go out after dark at your own peril. Last year one out of every four hundred Americans was murdered, raped, or robbed. *Birth control is an answer*."⁴⁸

This crime-in-the-streets, law-and-order approach selected the audience it wished to reach, and certainly it was not African Americans, who would appear to be the enemy—the human horde that must be stemmed. By whom? Evidently by those who "go out after dark at [their] own peril," a phrase that in the context of this ad seems to identify the respectable white population.

It is no wonder that African Americans rejected propaganda the ultimate implication of which was their forcible sterilization (a practice which, if rare, was by no means unknown in the United States). The attitude of some zero population growth advocates toward the Third World indicates, furthermore, that these perceptions may indeed have been justified. When the crowded slum was in a foreign country, there was no hesitation at all to invoke force in the name of population control for the poor.

In *The Population Bomb*, Ehrlich stated his agreement with Paul and William Paddock, authors of a book called *Famine—1975!*⁴⁹ The Paddocks proposed a triage approach to food aid based on traditional army medical policy. Those countries which had plenty of resources need not be helped because they could help themselves. Those on the borderline, which could survive but only with help, should be aided to the maximum. "Finally," Ehrlich noted in his summary of their proposal, "there is the last tragic category—those countries that are so far behind in the population-food game that there is no hope that our food aid will see them through to self-sufficiency. The Paddocks say that India is probably in this category. If it is, then under the triage system, she should receive no more food." He added, "In my opinion, there is no rational choice except to adopt some form of the Paddock's strategy as far as food distribution is concerned."⁵⁰

While countries like India would be abandoned, others would be required to introduce strict, involuntary population control as a condition for receiving food. Ehrlich comments: "Coercion? Perhaps, but coercion in a good cause. I

am sometimes astounded at the attitudes of Americans who are horrified at the prospect of our government insisting on population control as the price of food aid. All too often the very same people are fully in support of applying military force against those who disagree with our form of government or our foreign policy. We must be relentless in pushing for population control around the world."⁵¹

If this remark is "brutal and heartless" (the words are Ehrlich's own), what are we to say of Garrett Hardin's still more eloquent defense of the same position? "How can we help a foreign country to escape overpopulation? Clearly the worst thing we can do is send food. The child who is saved today becomes a breeder tomorrow. We send food out of compassion, but if we desired to increase the misery in an overpopulated nation, could we find a more effective way of doing so? Atomic bombs would be kinder." Hardin concludes, "Fortunate minorities must act as the trustees of a civilization that is threatened by uninformed good intentions."⁵²

Ehrlich was more squeamish in *How to Be a Survivor*. There he proposed a massive aid program for the Third World, remarking that U.S. leadership of the world struggle to lower birth rates "means leadership by example."⁵³ He went on to say, "The population problem cannot be 'solved' by withholding medical services or food and letting people die of disease or starvation."⁵⁴ Although he still believed that force was the surest instrument of rational demographic policies, he no longer suggested that the United States should exercise this force alone. Instead, he called for "mutual coercion, mutually agreed upon."⁵⁵ A world government would be needed to wield power over human numbers.

At this point, we have come full circle. In 1946, J. Robert Oppenheimer wrote, "Many have said that without world government there could be no permanent peace, and that without peace there would be atomic warfare. I think one must agree with this."⁵⁶ In its conception of salvation through world government, the postwar scientists' movement achieved a kind of ideological apotheosis, echoing a humanistic opposition to war going back to Kant. The resurgence of such a conception in an environmental movement based on a similar ideological infrastructure is not surprising. It is implicit in the whole approach, which consists in identifying a common survival interest of the species superseding all particular interests.

However, in contact with vulgar realities, the universalistic scheme of world government suffered a peculiar degeneration in the late forties, a degeneration which may shed some light on the ambiguities of the new environmentalist formulations. Worried about the implications of a nonwhite majority in a world state, scientists proposed what today we would certainly condemn as racist measures, such as votes weighted in favor of rich white nations.⁵⁷

Are these twisted proposals irrelevant relics of a bygone era? Or are they the typical consequences of the waves of impotent universalism breaking over

the shoals of powerful particularisms? World government in the interests of population control is fraught with dangers anticipated in the earlier disappointing experience with the concept. Mutual coercion can be exercised only by approximately equal powers, but only the developed countries have the capacity to enforce their will. Furthermore, it is only in these countries that there is any significant popular support for coercing poor nations into population control programs. The kind of world government which would use force to impose demographic controls would be a government of the developing countries by the developed ones.

THE RIGHT TO DEMOGRAPHIC TRANSITION

Commoner rejected this policy which, in his words, "would condemn most of the people of the world to the material level of the barbarian, and the rest, the 'fortunate minorities,' to the moral level of barbarian."⁵⁸ His approach to the problems of the Third World was based on a key historical analogy, the rise and fall of population growth rates in the West since the seventeenth century. Here is a case of a veritable population explosion which peters out after several centuries of its own accord. This cycle occurred without a massive experiment in involuntary birth control such as many would like to impose on the developing countries.

The phenomenon of rapid expansion followed by stabilization observed in the West is known as "demographic transition." It seems to be the result of lowered rates of infant mortality. Wherever there is great insecurity of life, birth rates rise to ensure the survival of a few of the many children born, but where there is sufficient food and adequate hygiene, infant mortality rates fall and there is a tendency for birth rates to follow them. Thus, "although population growth is an inherent feature of the progressive development of productive activities, it tends to be limited by the same forces that stimulate it—the accumulation of social wealth and resources."⁵⁹

On this basis, Commoner argued that the solution to the demographic problems of the Third World lay in increasing the standard of living there and making modern contraceptive methods available for voluntary use. This is in fact the solution preferred by most spokespersons for the countries concerned.

Commoner offered political and moral reasons for trying this solution before embarking on a program of "coercion in a good cause." He argued that the West is itself largely responsible for overpopulation in many developing countries, citing Nathan Keyfitz, who estimated that "the growth of industrial capitalism in western nations in the period 1800–1950 resulted in the development of a one-billion excess world population, largely in the tropics, as a result of the exploitation of these areas for raw materials (with the resultant need for labor) during the period of colonialism."⁶⁰ The capital accumulated in the colonized countries was exported back to the West, where it contributed

to the industrialization process that eventually stabilized population there. Commoner argued that a "kind of demographic parasitism" ensued in which colonizers slowed their own population growth by processes that accelerated that of the colonized.⁶¹ "Overpopulation" is thus really a euphemism for the proletarianization of the Third World.

Commoner claimed that we should recognize a "right of demographic transition" in the Third World countries devastated demographically by colonialism. This should involve some obligation on our part to help these countries achieve the levels of prosperity associated with a naturally falling birth rate. Most important, it should rule out the sort of drastic historical experiments in involuntary birth control suggested by the Paddocks and others.

Ehrlich wrote many sharp attacks on this position.⁶² He was convinced that the demographic transition could not take place soon enough to save many developing countries from famine. Further, he argued that industrialization in the Third World would strain already diminishing supplies of natural resources.

It is difficult for a nonscientist to evaluate a scientific disagreement such as this one.⁶³ In fact, neither Ehrlich nor Commoner appears to have been entirely correct. Ehrlich's hope that the advanced countries could be induced to promote Third World birth control got off to a good start, but was soon overtaken by the Reagan administration's alliance with abortion foes. Meanwhile, food production continued to rise long after Ehrlich claimed it had stagnated. On the other hand, the classic demographic transition does not appear to explain slowing birth rates in the Third World as Commoner expected. Education of women, later age of marriage, and availability of birth control devices seem to play an unexpectedly large role, to some extent independent of economic growth. Actual events thus reflect neither the expected consequences of prosperity in the demographic transition nor the disaster scenarios of the early 1970s.

Unfortunately, Ehrlich's and Commoner's recent books do little to advance the argument. Both authors now have the benefit of twenty years of demographic debate, but while both profess to believe in voluntary birth control and agree on some basic facts (such as the likely point at which world population will level off, ten billion), they seem not to have noticed the developments most damaging to their own arguments. Ehrlich, for example, still expects "the stork to pass the plow," just a bit later than 1968 or 1975.⁶⁴ Commoner does not discuss the implications for women of the demographic transition argument on which he continues to rely.

Conclusion: Beyond the Politics of Survival

The Commoner-Ehrlich debate provides a window onto the deep and apparently unavoidable conflicts inherent in environmental politics, conflicts

that were already implicit in the earlier scientists' movement for nuclear disarmament. The contemporary political sensibility must be informed by the nuclear—now also environmental—age, from which we learn the threat to survival contained in the very nature of our civilization. A society that can destroy life on earth by the careless application of fluorocarbon deodorant sprays is indeed beyond the pale of any rational calculation of its chances for survival. In principle, history is over in the sense that the old conflicts and ambitions must give way to a radically new type of human adventure or the species will surely die. Nevertheless, in practice the unfinished work of history continues, indeed intensifies the very horrors and upward struggles that threaten survival, yet also promise a precious spark of light to those hitherto excluded from the benefits of technical advance. Insensitivity to this ambiguity leads to a politics of despair that would freeze the current relations of force in the world—and with them the injustices they sustain—as a condition for solving the problem of survival. That this is an impossible route to salvation is abundantly clear from the whole experience of the nuclear and environmental movements.

What we most need to learn is that action to end history is still action in history for historical objectives. The human species is not yet the subject of the struggle to survive; thus, this struggle itself becomes a facet of the very class and national struggles whose ultimate obsolescence it demonstrates. From this dialectic there can be no escape.

The early seventies gave us a dress rehearsal of far deeper crises to come. If there was ever any doubt about the environmental crisis intensifying social and international conflict, that doubt should now be silenced. In short, the environmental crisis brings not peace but a sword, and precisely for that reason it is not a unifying messianic force through which the human race could join in an ennobling struggle beyond the petty conflicts of history. Rather, it is a new terrain on which the old issues will be fought, perhaps this time to a conclusion.

Notes

1. Recent books by Ehrlich and Commoner restate their positions in ways somewhat softened by time, bringing the debate up to date. See Paul and Anne Ehrlich, *The Population Explosion* (New York: Simon and Schuster, 1990); and Barry Commoner, *Making Peace with the Planet* (New York: Pantheon, 1990). I will comment on them where they are relevant, but I do not pretend to offer a full picture of these new books which, while sometimes more reasonable than the authors' original work, do not have the seminal importance of their initial contributions in defining the ideological polarities of the environmental movement.

2. For a detailed account of the scientists' movement, see Alice K. Smith, *A Peril and a Hope* (Cambridge, Mass.: The MIT Press, 1965). For a discussion of the concept

of the "end of history" in relation to science fiction, see Andrew Feenberg, *Alternative Modernity* (Berkeley: University of California Press, 1995), pp. 43-56.

3. Ehrlich, *The Population Bomb* (New York: Ballantine, 1968), pp. 66-67.
4. Barry Commoner, "Motherhood in Stockholm," *Harpers Magazine* (December 1973): 53.
5. Barry Commoner, Paul Ehrlich, and John Holdren, "Dispute: The Closing Circle," *Environment* 14, no. 3 (April 1972): 40.
6. Commoner, "Labor's Stake in the Environment/The Environment's Stake in Labor," presented at the Conference on Jobs and the Environment, San Francisco, 28 November 1972 (mimeo, p. 33).
7. Ehrlich, *The Population Bomb*, p. 34.
8. Donella H. Meadows et al., *The Limits to Growth* (New York: Universe Books, 1972), p. 142.
9. The Ecologist, *A Blueprint for Survival*, with an introduction by Paul Ehrlich (New York: Signet Books, 1974). Cf. Sicco Mansholt, *La lettre Mansholt* (Paris: Pauvert, 1972.)
10. Robert Heilbroner, *An Inquiry into the Human Prospect* (New York: Norton, 1974), p. 156.
11. *Ibid.*, p. 141.
12. Miss Ann Thropy, "Population and AIDS," *The Earth First! Journal* (5 January 1987): 32.
13. Ehrlich and Ehrlich, *The Population Explosion*, p. 157.
14. Commoner, *The Closing Circle* (New York: Bantam, 1971), p. 175.
15. *Ibid.*, p. 231
16. *Ibid.*, p. 175
17. *Ibid.*, p. 13
18. *Ibid.*, p. 282
19. *Ibid.*, p. 284.
20. *Ibid.*, p. 272.
21. Commoner, *Making Peace with the Planet*, p. 223.
22. Paul R. Ehrlich and Richard L. Harriman, *How to Be a Survivor: A Plan to Save Planet Earth* (New York: Ballantine Books, 1971), p. 136.
23. Commoner, Ehrlich, and Holdren, "Dispute: The Closing Circle," pp. 23ff. The two articles published here, a review of *The Closing Circle* by Ehrlich and Holdren accompanied by Commoner's rejoinder, culminate the debate. A somewhat different version of the piece by Ehrlich and Holdren was published in *The Bulletin of the Atomic Scientists*, May 1972. The June issue of the *Bulletin* contains a re-rebuttal by Ehrlich and Holdren, entitled "One-Dimensional Ecology Revisited." See also Ehrlich's letter to *The New York Times*, 6 February 1972, sec. 7, p. 42. This section summarizes the central argument of these publications.
24. Ehrlich and Ehrlich, *The Population Explosion*, p. 40.
25. *Ibid.*, p. 137. Ehrlich's position is more convincing in relation to African agriculture than Western industry. For example, he merely asserts that there is a nonlinear relation between population and acid rain without offering or citing any evidence (p. 123). It should be pointed out that Commoner does agree with Ehrlich now that a problem of diminishing returns exists with regard to fossil fuels; however, he is confident that solar energy can provide a relatively near-term alternative (Commoner, *Making Peace with the Planet*, pp. 197-198).
26. Ehrlich, *The Population Bomb*, pp. 24-25. There remain echoes of this law-and-order environmentalism in the Ehrlich's current work, but he concedes reasonably that no causal relationship can be demonstrated between crime and crowding (Ehrlich and Ehrlich, *The Population Explosion*, pp. 11, 157).

27. Commoner, *The Closing Circle*, p. 212.
28. *Ibid.*, p. 233.
29. Ehrlich, *The Population Bomb*, p. 175; Gladwin Hill, "Scientific and Welfare Groups Open a 4-Day Study of Population Growth," *The New York Times*, 9 June 1970, p. 32.
30. Commoner, *The Closing Circle*, p. 209.
31. *Ibid.*, p. 212.
32. Ehrlich and Harriman, *How to Be a Survivor*, p. 149.
33. Leonard Silk, "Questions Must Be Raised about the Immanence of Disaster," *The New York Times*, 13 March 1972, p. 35.
34. "Group Seeks to Shift Protests on Pollution," *The Los Angeles Times*, 5 May 1971, sec. 1, p. 25.
35. As Henry Ford II put it, "The successful companies in the last third of the twentieth century will be the ones that look at changes in their environment as opportunities to get a jump on the competition." *The Human Environment and Business* (New York: Weybright and Talley, 1970), p. 62.
36. B. Commoner, *The Closing Circle* (New York: Bantam, 1971), p. 271.
37. Commoner, "Workplace Burden," *Environment* (July/August 1973): 20.
38. Commoner, Ehrlich, and Holdren, "Dispute: The Closing Circle," pp. 45-46.
39. Testimony of Barry Commoner, *Congressional Record*, 1972, 593.
40. For significant attempts to theorize such a challenge from an environmental perspective and in semiotic terms, respectively, see William Leiss, *The Limits to Satisfaction* (Toronto: University of Toronto, 1976); and Jean Baudrillard, *La société de consommation* (Paris: Gallimard, 1970).
41. For a fuller discussion of this point, see Andrew Feenberg, *Critical Theory of Technology* (New York: Oxford University Press, 1991), chap. 8.
42. Ehrlich and Harriman, *How to Be a Survivor*, p. 155.
43. *Ibid.*, pp. 76-77.
44. For an illuminating discussion of the relation between material and spiritual values, see Alvin Gouldner, *The Coming Crisis in Western Sociology* (New York: Basic Books, 1970), pp. 326-331.
45. Ehrlich and Holdren, "One-Dimensional Ecology Revisited," *The Bulletin of the Atomic Scientists* (June 1972): 44.
46. Ehrlich and Ehrlich, *The Population Explosion*, pp. 58, 228-229, 219, 139.
47. Ehrlich and Harriman, *How to Be a Survivor*, p. 23.
48. Quoted in Commoner, *The Closing Circle*, p. 232.
49. William and Paul Paddock, *Famine—1975!* (Boston: Brown, 1967).
50. Ehrlich, *The Population Bomb*, pp. 160-161.
51. *Ibid.*, p. 166.
52. Garrett Hardin, "The Survival of Nations and Civilization," *Science* 172 (1971): 1792. Note the metaphoric equivalence of the population bomb and the atomic bomb, characteristic of this trend.
53. Ehrlich and Harriman, *How to Be a Survivor*, p. 17.
54. *Ibid.*, p. 52.
55. The phrase is Hardin's. Cf. "The Tragedy of the Commons," in *The Environmental Handbook*, ed. Garrett de Bell (New York: Ballantine, 1970), p. 45.
56. J. Robert Oppenheimer, *The Open Mind* (New York: Simon and Schuster, 1955), p. 12.
57. See Reinhold Niebuhr, *The Bulletin of the Atomic Scientists* (October 1949): 289; Edward Teller, *The Bulletin of the Atomic Scientists* (December 1947): 355, and *The Bulletin of the Atomic Scientists* (September 1948): 204; and E. M. Friedwald, *The Bulletin of the Atomic Scientists* (December 1948): 363.

58. Commoner, *The Closing Circle*, p. 296.
59. Commoner, *The Closing Circle*, p. 116.
60. *Ibid.*, p. 243.
61. *Ibid.*, p. 244.
62. Most recently in Ehrlich and Ehrlich, *The Population Explosion*, pp. 214–216.
63. For recent articles, see Hendry Peter, “Food and Population: Beyond Five Billion,” *Population Bulletin* 43, no. 2 (1988); and Thomas Merrick, with PRB Staff, “World Population in Transition,” *Population Bulletin* 41, no. 2 (1986).
64. Ehrlich, *The Population Explosion*, pp. 108–109.

Chapter Twelve

The Problem of Nature in Habermas

Joel Whitebook

1996 Introduction

Written almost twenty years ago, “The Problem of Nature in Habermas”—which is being published here more or less in its original form—belongs to an earlier phase in both my own thinking and in the development of critical theory and the ecology movement. Rereading it today, though I discovered a number of stylistic points that I would have like to have changed, I was also surprised to find how sound I still consider many of its formulations. Indeed, many of the questions posed in the article continue to engage my thinking today, and the main dilemma it addressed has by no means been resolved.

“The Problem of Nature in Habermas” was my first sustained confrontation with the debate, if it can be called that, between the first and second generations of the Frankfurt School. Having broken my theoretical teeth on Marcuse in the sixties, and having gone on to devour Horkheimer and Adorno’s *Dialectic of Enlightenment* in the early seventies, I was grappling with the consequences of the Habermasian turn for critical theory. Although there may have been a shift of emphasis in the topics I have subsequently addressed (owing, in part, to the fact that I turned my attention to the problem of inner nature and became a practicing psychoanalyst along the way) the force field between Adorno’s and Habermas’s philosophy continues to animate my thinking.

This essay was, if not the first, at least one of the first articles to address systematically the ecological crisis from within critical theory. It must be recalled that in the early seventies, the ecology crisis was only beginning to