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# The Political Economy of Barry Commoner

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# ESSAYS

## THE POLITICAL ECONOMY OF BARRY COMMONER

By  
JAMES E. KRIER\*

The centerpiece of what follows is an article by Barry Commoner that appeared in *The New Yorker* magazine in 1987.<sup>1</sup> The article, although an essentially popular work, is for several reasons worth the attention of a community professionally interested in law and the environment. First, it distills and supplements views that Commoner has advanced with much prominence throughout the life—twenty years to date—of the environmental movement in the United States. Thus it provides an opportunity for the present generation's students of environmental law, many of whom seem to know nothing of Commoner and his ideas, to become familiar with a significant voice in the intellectual history of the field. Second, the article endorses, as does some of Commoner's earlier work, a message of fundamental importance for anyone interested in the quality of the environment, and for lawyers in particular: to understand environmental problems, one has

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\* Earl Warren DeLano Professor of Law, University of Michigan. This Essay was first presented as an address at the Northwestern School of Law of Lewis and Clark College during my tenure as a Distinguished Visitor in Environmental and Natural Resources Law, Oct. 2-4, 1989. I am grateful to Lewis and Clark for its hospitality and to my colleague Rick Pildes for his comments.

1. Commoner, *A Reporter at Large, The Environment*, THE NEW YORKER, June 15, 1987, at 46 [hereinafter NEW YORKER]. Commoner expressed similar views in an address presented to the United States Environmental Protection Agency in January 1988. See Shabecoff, *E.P.A. Critic Enters the Lion's Den and is Showered by Wild Applause*, N.Y. Times, Jan. 15, 1988, at B6. For a version of the EPA address, see Commoner, *Failure of the Environmental Effort*, [18 News & Analysis] *Envtl. L. Rep.* (Envtl. L. Inst.) 10,195 (1988).

to understand economics and politics. This is a point I have urged upon students throughout my own twenty years of academic concern with environmental law and policy, against substantial resistance. Perhaps I can do better by enlisting Commoner, an ardent environmentalist of high standing, in behalf of the cause. That said, though, I should make clear a third reason to consider Commoner's article. It is one thing to see the relevance of political and economic theories and another to use them cogently. Commoner's critique of our present environmental situation is troublesome, and the program he proposes only more so.

By training, Barry Commoner is a scientist. He received a Ph.D. in biology from Harvard on the eve of the Second World War. After service in the Navy and a brief stint as a science editor, he went on to teach for many years at Washington University in St. Louis, eventually becoming director of the University's Center for the Biology of Natural Systems. He now heads a center of the same name at Queens College in New York. His entry in *Who's Who* (which appears immediately before the name of Perry Como, the singing barber) makes clear that Commoner has never been the sort of biologist content to closet himself in some laboratory with a collection of embalmed frogs. To the contrary, his career has been busy with public activity, even activist activity. He has long worked with the Scientists Institute for Public Information, for example, and he has advised the St. Louis Committee for Nuclear Information, a Vietnam Veterans group, various governmental agencies, and so on. Yet, notwithstanding his heavy load of public service, Commoner has also distinguished himself as a scholar, winning many citations and awards.

Academic recognition seldom makes for public renown, but midway through his career Commoner wrote a popular account of the environmental crisis (like the article that shall occupy us here, it appeared in *The New Yorker*) that was subsequently expanded and published as a book, *The Closing Circle*, in 1971.<sup>2</sup> That, of course, was just when the environmental movement was reaching perhaps its most feverish point, and the articulate forcefulness of Commoner's rather radical views, some of which I will outline presently, must have outraged one part of the public and

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2. B. COMMONER, *THE CLOSING CIRCLE* (1971) [hereinafter *CIRCLE*]. The copyright page indicates that a substantial portion of the book first appeared in *The New Yorker*.

captivated another. Hence, I am sure that the article and the book were widely read, both in this country and abroad. So too of *The Poverty of Power*, published in 1976, which also made its debut in *The New Yorker* magazine.<sup>3</sup>

*The Closing Circle* and *The Poverty of Power* are not the only books Commoner has written for a mass audience, but I expect they are the best known—even if they are not known at all by today's young environmentalists. Those young environmentalists also seem to be generally unaware (judging at least from my own students) that Commoner was a candidate for President of the United States, running on the Citizens Party ticket in 1980. Maybe the only thing virtually everyone knows about Commoner is that he didn't win the election.

Commoner's 1987 article in *The New Yorker* adds little, in terms of theme, to what he had already said in *The Closing Circle* and *The Poverty of Power*. I mention this not as a criticism, but rather as an indication that the 1987 article presents an occasion to consider, within a conveniently small compass, the central, matured ideas of a provocative and thoughtful man who has for many years dedicated all of his professional and public endeavors to problems of environmental quality. Moreover, while Commoner's article is not fresh in some respects, it is in others. It draws together an abundant amount of evidence, unavailable at the time of the earlier work, for the proposition that some twenty years of pronounced effort have accomplished surprisingly little by way of environmental improvement. It also presents, though only roughly, Commoner's sketch of a path to progress. Between these two parts of the 1987 article stand the major themes from *The Closing Circle* and *The Poverty of Power*. They serve as a bridge connecting Commoner's vision of where we are to his vision of where we could be.

Barry Commoner has been called one of the "founding fathers" of the environmental movement.<sup>4</sup> The description is entirely apt, and it suggests why today's environmentalists should consider, sympathetically, his general approach to the ills of pol-

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3. B. COMMONER, *THE POVERTY OF POWER* (1976). Again, a substantial portion of the book first appeared in *The New Yorker*.

4. See Rubin, *Environmental Policy and Environmental Thought: Ruckelshaus and Commoner*, 11 ENVTL. ETHICS 27, 29 (1989) (citing Ruckelshaus, *Risk, Science, and Democracy*, ISSUES IN SCI. & TECH., Spring 1985, at 19-20 (1985)).

lution. And in that connection, as I suggested earlier, Commoner is convinced that the problem has to be understood in terms of its economic and political foundations. The economic and political systems are at the root, all else being the symptoms.

This important point is expressed very clearly in the article in *The New Yorker*. We read there that

the decisions that govern environmental quality originate in the economic realm, and are translated into the design of productive technology, which—as now constituted—in turn visits upon the environment the evils of pollution. . . . Because the effort to improve the environment is so closely linked to the decisions that govern the technology of production, it is inevitably drawn into the realm of politics.<sup>5</sup>

The argument, of course, is that market forces drive technology, and technology impacts upon the environment. Many of its effects are egregious, so there is at least a prima facie case for the government to intervene in the market and redirect it. Obviously, if one is to understand market forces, one has to understand the discipline of markets, which is to say economics; and if one is to understand governmental intervention, one has to understand the discipline of government, which is to say politics.

I think no one could rightly deny the foregoing, yet many people deny it wrongly—implicitly, at least—all the time. They deny it by stubbornly maintaining their ignorance in the face of an obvious need for knowledge, by being narrow-minded when they should be the opposite, by being utterly uncurious about even the rudiments of economic and political theory as they pertain, in this case, to environmental problems. Such theory, I gather, is regarded as too big a bother to learn, or too remotely related to one's personal bottom line, which is to say "career prospects." People don't necessarily express these reasons, of course; they are more likely to offer the excuse that economics and politics are corrupt, hence corrupting, hence best left alone. All the while, though, many of these same people maintain that they are sincerely committed, even passionately committed, to easing the burden of pollution. Yet how can they hope to deal with symptoms, with effects, without understanding their causes?

Commoner sees this, but at the same time recognizes the

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5. NEW YORKER, *supra* note 1, at 60, 68.

hazards of stepping outside tight disciplinary lines. He addressed that problem explicitly in *The Closing Circle*, his first extended investigation into the topics revisited in the 1987 article. Here is what Commoner wrote in 1971:

There are powerful links between the environmental crisis and the troublesome, conflicting demands on the earth's resources and on the wealth created from them by society.

Here, the environmentalist's concerns, which already range from the physical sciences, through biology, to engineering, technology, and demography [but what of law?], enter the even more controversial reaches of economics and political economy. If the environmentalist shrinks from intruding upon the complex domain of the economist and the political scientist, then *they* will need to find their own way into the equally difficult terrain of the environmental sciences. On the other hand, if the environmentalist plunges headlong into economic matters, he may quickly lose his way in a maze of unfamiliar theory and poorly understood controversies, finally to be swamped in a flood of professional disdain. Nevertheless, it seems to me that given the urgency of the situation, both economist and environmentalist are obliged to take the risk of reaching across the boundaries of their disciplines and to accept the consequent criticism as something to be borne, cheerfully if possible, as a social duty.<sup>6</sup>

In that spirit, let us critically examine the political economy of Barry Commoner.

For me, and I think for Commoner and everyone else, political economy signifies the study of relationships between economic and political systems. For many of its practitioners, though, political economy also means something more specific, namely the application of economic assumptions and methodology to the investigation of political behavior. It appears that Commoner does not subscribe to this second branch of political economy (if he ever did, the subscription must have expired), but I, in my lowbrow way, do. Hence, though Commoner and I share an interest in observing connections between markets and politics, and even see much the same phenomena, we part company at the point of interpreting them. Commoner's interpretation largely abandons the discipline he so rightly introduced, while mine continues to pursue it. The result is two rather different—in the end, starkly dif-

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6. CIRCLE, *supra* note 2, at 250-51 (emphasis in original).

ferent—visions of the very same world.

But begin with points of agreement, especially about some facts. As Commoner reminds us, the twenty years of effort and even more billions of dollars devoted to the environment since Earth Day 1970 have generated a great abundance of statistical information, an important but nevertheless ironic accomplishment given what it shows.<sup>7</sup> We now know, from the readings of extensive monitoring systems, from a mass of technical data, and from reports collecting and analyzing this evidence, that our success in improving the quality of the environment has been rather modest. In some instances, we are at a standstill, or are moving backwards, with the picture over the last half dozen years or so being especially bleak.

This, at least, is Commoner's reading of the facts, which I haven't any reason to question. One hears claims of solid improvements in environmental quality mostly from the industries that are regulated and from the governments that regulate them, both of which have reasons, as the song says, to accentuate the positive and de-emphasize the negative. Of course, Commoner too has his interests to serve, yet the statistics he relates seem to speak for themselves.<sup>8</sup>

For example, emissions of air pollutants decreased, on average, only some thirteen percent over the years 1975 to 1985, with the exception of lead, where emissions fell almost ninety percent. Lead aside, dust emissions have dropped the most, notwithstanding that they actually increased between 1982 and 1985. Sulfur dioxide emissions also have declined over the last ten years, nineteen percent as compared to the thirty-two percent for particulates, but most of this improvement came between 1975 and 1981. Since then there has been essentially no improvement. Similarly, while carbon monoxide emissions fell by fourteen percent between 1975 and 1985, a look at just the years from 1982 to 1985 shows an increase in emissions. Nitrogen oxide emissions increased four percent over the ten years from 1975 to 1985. Concentrations of ozone, a secondary pollutant to which nitrogen oxides contribute, decreased some fifteen percent over the years

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7. See *NEW YORKER*, *supra* note 1, at 46.

8. *Id.* at 46-54. My summary of the facts regarding the state of the environment is drawn from Commoner's account.

1975 to 1981, but have held constant since. Ozone—more commonly, photochemical smog—is now the nightmare of virtually every major urban center of the United States, many of which have little chance of attaining, in the foreseeable future, the health standards established as long ago as 1970 under the terms of the Clean Air Act.

Commoner depicts the situation with water pollution in much the same terms: “nationally, there has been little or no over-all improvement in the levels of the five standard pollutants that determine water quality,” judging at least from a survey for the years 1974 to 1981.<sup>9</sup> For some important pollutants there appear to have been disturbing increases over that period. For example, levels of nitrates, a pollutant chiefly contributed by the use of nitrogen fertilizers in agriculture, show many more increases than decreases at various test stations around the country. The occurrence in rivers of arsenic and cadmium (both toxic) went up sharply, though lead went down. Fecal coliform bacteria foreclosed safe swimming at half the survey sites. In sum, average trends in standard measures suggest that the nation has suffered at least a slight decline in surface water quality, despite the supposedly heady requirements of the Clean Water Act. The ground-water picture is equally unsatisfying, and with respect to some pollutants—nitrates again, for instance—is expected to get worse.

I have not bothered to give every detail of Commoner’s survey of trends in conventional air and water pollution, and I shall likewise not bother with his blow-by-blow account of the situation regarding a host of other environmental problems that have come to concern us only more recently. Suffice it to say that for toxic chemicals, radioactive materials, ozone depletion, and carbon dioxide levels in the atmosphere (the worry here is the greenhouse effect), Commoner can once again refer to disturbing facts, figures, and trends. The existing situation and projections for the future are disheartening, especially when measured in terms of all that was promised by the raft of state and federal legislation enacted since 1970. “Apart from a few notable exceptions, environmental quality has improved only slightly and in some cases has become worse.”<sup>10</sup>

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9. *Id.* at 51.

10. Shabecoff, *supra* note 1, at B6 (quoting Commoner).



How account for such a dismal picture? Before considering Commoner's answer, which leads directly into his economic and political critique and his program for reform, let me at least mention some plausible explanations—partial explanations, anyway—that he simply neglects.

An apparently curious feature of the environmental data Commoner surveys is that, with many of the conventional air and water pollutants, we did better early on in our control efforts than we have more recently. The years 1975 to 1980 generally read more favorably than do the years 1981 through 1985. Perhaps, though, this is just what should have been expected. Our environmental record prior to Earth Day 1970 was, after all, a very poor one (that is why there *was* an Earth Day), such that once the new control programs got underway they found themselves with an abundance of easy targets. Allowing five years or so to get all the programs enacted and into operation, we would expect to see the most substantial gains in the early years after 1975. We would also anticipate, however, that the rate of improvement might soon start to decline, in part because the more pollution abatement already accomplished, the more difficult the next marginal improvement (absent significant technological breakthroughs, of which more later); and in part because polluters learn over time not only how to observe governmental regulations, but also how to evade them. (The increasing savvy of polluters might also contribute to the retrograde moves observed in the pollution data.)

Turning from conventional to toxic pollutants, a somewhat similar story can be suggested. In his article, Commoner describes these pollutants as "a new environmental threat,"<sup>11</sup> but of course the threat is really new only in the sense that we are now much more aware of it than before; the toxic compounds themselves have been around for at least a generation, and in some cases much longer, as Commoner acknowledges.<sup>12</sup> My own view is that the problem of toxic pollutants was for some time swamped by the salience of more obvious and acute conventional ones. The conventional pollutants, in other words, caused lots of noise (figuratively, but literally as well), and only when this was abated could we hear the toxics softly calling for our attention.

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11. NEW YORKER, *supra* note 1, at 52.

12. *Id.*

Additionally, there is the fact that we simply know more now than we did several decades ago. We have better monitoring data, better models, better science, and the more we know the worse we seem to be doing, even though we might actually be gaining ground relative to the past.

I suppose Commoner would acknowledge this point about improved information, though I doubt he would give it much weight. (I likewise doubt that he would think much of my other speculations, but, like Commoner, I am ready to bear any criticism cheerfully.) His own view is that our especially poor record of performance since 1981 owes mostly to two factors, one of them particular and the other general, or fundamental.<sup>13</sup>

The particular factor is the Reagan Administration, which of course took office in the very year that Commoner sees as a turning point. The Environmental Protection Agency suffered substantial budget cuts under Reagan, especially regarding enforcement, and it might well have been this that led to a subsequent decline in enforcement proceedings, and in turn, to reduced capital outlays by industry for pollution abatement. More fundamentally, though, Commoner sees our situation as the inevitable product of an ill-conceived approach to environmental improvement, an approach that must fail in the long run no matter what sort of administration might be in office. Here his account flows directly from his political economy, which rather quickly moves him into troubled waters, as we shall see.

At the heart of Commoner's argument is the distinction between eliminating pollutants, on the one hand, and merely controlling them with technical modifications and devices, on the other. Thus, he notes that by far the most significant improvements in environmental quality—those experienced with lead and DDT, for example—have been accomplished by banning, or virtually banning, introduction of the offending pollutants into the environment. Where we have simply tried to limit pollution output through the use of source controls instead, the result (as we have seen) has too often been modest initial gains, which in some cases soon stopped and in others actually suffered reversal. "Thus," Commoner says, "the decade or more of effort to improve the quality of the environment teaches us a fairly simple lesson: pol-

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13. *Id.* at 54-57.

lution levels can be reduced enough to at least approach the goal of elimination only if the production or the use of the offending substances is halted."<sup>14</sup>

Commoner's reasons for this view are easy enough to anticipate, but they are also bewildering to consider. No control device is perfect; there is always some outflow of emissions under the best of conditions, and it goes up as control devices suffer wear and tear. Hence, as Commoner explains, "continued increase"—that is, continued *growth*—"in the pollution-generating activity (traffic, for example) will gradually overwhelm the devices' effect on environmental quality."<sup>15</sup> Moreover, abatement technology cannot be applied at all in some important cases, such as the runoff from pesticides, herbicides, and fertilizers used in agriculture. These nonpoint sources of pollution are too numerous and diffuse to control with devices, supposing we could imagine devices to apply in the first place. Hence, as the offending activities grow, so does the load they put on the environment.

These are sensible observations, and ones I could have mentioned earlier myself when I was speculating about the reasons for our declining performance in controlling pollution. What befuddles me about Commoner's reference to them in his 1987 article is that he has long held a very contrary view. He has insisted for years that growth—in population, industrial activity, and so forth—is *not* the mainspring of environmental deterioration. And strangely enough, but all the more befuddling, there are indications in the 1987 article that he still believes this. For example, he observes early on in the article that our success in controlling air pollution declined between 1982 and 1985 as compared to the years between 1975 and 1980, even though industrial activity increased at about the same rate in each period.<sup>16</sup> The implication, obviously, is that the rate of industrial activity hasn't all that much to do with the rate of pollution.

Commoner is much more emphatic about this later in his account, where he attacks the claim of some environmentalists (he has especially in mind figures like Garrett Hardin and Paul Ehrlich) "that the key to environmental quality is population con-

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14. *Id.* at 57.

15. *Id.* at 56.

16. *Id.* at 54.

trol.”<sup>17</sup> For Commoner the problem is not growth—in population or in the economy—but rather technology. More particularly, the problem is the *particular sort* of technology that developed after, and no doubt in consequence of, the Second World War. (Commoner, remember, had just finished his education as a biologist in 1941. We can suppose that his observations of the technological rush that got underway with the war had some considerable impact on his thinking. Thirty years after receiving his Ph.D. he referred to the period of World War II as “a great divide between the scientific evolution that preceded it and the technological revolution that followed it.”)<sup>18</sup>

Regarding the economy, Commoner says that the issue “is not how to facilitate environmental quality by limiting economic development but how to create a system of production that can grow and develop in harmony with the environment.” Regarding population, he says that “what needs to be controlled is not the birth rate but the production technologies that have engendered” our modern environmental calamities.<sup>19</sup>

These, as I have suggested, are themes that run far back for Commoner, at least to 1971 and his book *The Closing Circle*. He observed there that “most pollution problems made their first appearance, or became very much worse, in the years following World War II. . . . It is easy to demonstrate,” he said, “that the changes in pollution level in the United States since World War II cannot be accounted for simply by the increased population, which in that period rose by only 42 percent.” He then went on to show, using the data as he saw it, “that the ratio between the amount of pollution generated in the United States and the size of the population has increased sharply since 1946.”<sup>20</sup> The growth of pollution, in other words, had far outpaced the growth of population. It had likewise outpaced the increase in affluence during the years after the War, and could not be explained solely in terms of increased consumption. Declining productive efficiency was also eliminated as an important cause. “In sum,” Commoner argued,

there appears to be no way to account for the rapid growth in pol-

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17. *Id.* at 64.

18. CIRCLE, *supra* note 2, at 129.

19. NEW YORKER, *supra* note 1, at 64-65.

20. CIRCLE, *supra* note 2, at 128, 133, 136.

lution levels in the United States since 1946 by the concurrent growth in the overall size of the population. Neither simple increase in numbers, the multiplicative effects of urban crowding, nor a supposed decrease in productive efficiency can explain the sharp increases in pollution which are the mark of the environmental crisis. The explanation must lie elsewhere.<sup>21</sup>

The "elsewhere" for Commoner is the alteration in the nature of technological output that followed on the heels of World War II; "what has changed drastically," he said, "is the technology of production rather than over-all output of the economic good."<sup>22</sup>

New production technologies have displaced old ones. Soap powder has been displaced by synthetic detergents; natural fibers (cotton and wool) have been displaced by synthetic ones; steel and lumber have been displaced by aluminum, plastics, and concrete; railroad freight has been displaced by truck freight; returnable bottles have been displaced by nonreturnable ones. On the road, the low-powered automobile engines of the 1920's and 1930's have been displaced by high-powered ones. On the farm, while per capita production has remained about constant, the amount of harvested acreage has decreased; in effect, fertilizer has displaced land. Older methods of insect control have been displaced by synthetic insecticides, such as DDT, and for controlling weeds the cultivator has been displaced by the herbicide spray. Range-feeding of livestock has been displaced by feedlots.<sup>23</sup>

Commoner concluded that the post-war increases in pollution simply could not be accounted for in terms of population and affluence alone. These are of some importance, but they are not nearly as important as are fundamental alterations in the technology of production.

These early views of Commoner's were vigorously attacked—in some instances by environmentalists, who entered a number of objections: that Commoner manipulated the data in order to make his points; that he overlooked the centuries upon centuries of degradation a growing population had managed to inflict upon the environment without even primitive versions of the technologies that Commoner now saw as so important; that he

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21. *Id.* at 135.

22. *Id.* at 144.

23. *Id.*

attributed effects to technology that should instead be attributed to affluence (the effects of using air-conditioning, for example); that he had done nothing but present the socially comfortable yet terribly dangerous message that modern mankind has no good reason to worry about its growing numbers.<sup>24</sup>

Let me add to this list another criticism that seems more fundamental. Commoner's argument about the changing face of technology does nothing to contradict the importance of population growth. If anything, it does exactly the opposite because many of the technological shifts canvassed by Commoner can so plausibly be explained as reactions to increases in population size and concentration. As a population grows, a firmly finite physical resource—land—becomes relatively more scarce, and hence increases in price. This in turn creates incentives to substitute for land other inputs to production. We would expect, then, that population increase would lead to just what Commoner observed: the displacement of cotton and wool, both of which are land-intensive, by synthetics; the displacement of wood by plastics; the heightened use of fertilizer (which increases yield per acre); the substitution of feedlots for range-feeding of livestock. Similarly, the increasing concentration of the population—its redistribution in space as opposed to its absolute growth in number—might well account in part for the transformation of the American automobile mentioned by Commoner.

Despite these and other criticisms, Commoner has held steady over the years. His 1987 article reiterates, however briefly, the views about growth and technology first stated in *The Closing Circle* in 1971.<sup>25</sup> Recall from our earlier discussion that those views are rather contradictory in that Commoner denies the importance of growth but at the same time relies on it to explain why partial technical controls must fail: the gains accomplished by control technology are soon overwhelmed by the increased polluting activity that accompanies growth. But why not, in that event, simply control more?

The answer, which I alluded to earlier, is straightforward: generally speaking, the marginal costs of control go up the more one has already controlled. It is one thing to cut emissions from a

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24. See, e.g., Ehrlich & Holdren, Book Review, *Env't*, Apr. 1972, at 24.

25. See, e.g., *NEW YORKER*, *supra* note 1, at 60-61.

source by ninety percent, for example, and quite another to cut the remaining ten percent by ninety percent again—yet growth in population, and thus in the number of pollution sources, might require exactly this. Essentially, we would have to install on the sources a second round of the same control devices installed in the first instance, much as in Dr. Seuss's story of the Cat in the Hat.<sup>26</sup> But, whereas the first round of devices had cut by ninety percent whatever was being emitted, and whereas the second round cuts the remainder by ninety percent again, the absolute amount of pollution controlled in round two is just a small fraction of what was controlled in round one. Yet the cost of this modest gain exactly equals that of the far greater gains accomplished the first time around. This explains why the marginal costs of more stringent pollution controls typically escalate so rapidly. Escalating costs, of course, are anathema to industry, which for that reason opposes tightened standards. Since industry is politically powerful (more of that in a moment), partial controls must once again fail.

This only follows, however, if one denies the possibility of technological breakthroughs, by which I mean innovations that sidestep the need for a looming tower of control devices, one atop the other (again as in Seuss's image of a cat in a hat on the head of another cat in a hat on the head of another, and so on).<sup>27</sup> Technological breakthroughs, in other words, are fundamentally new ways of accomplishing whatever was being accomplished before, but at a much reduced cost. There is a large band of people, aptly called technological optimists, who believe that such innovations will always appear, just as they always have.<sup>28</sup>

One would think that Commoner, like most environmentalists, is decidedly *not* a technological optimist. Oddly enough, though, he *is*, and like many of the optimists he believes that population controls are unnecessary and ill-advised. He departs from the other technological optimists, however, in terms of his technological prescriptions. Whereas most optimists seem to believe that we can safely continue our present technological ways, Commoner believes that we must radically alter them. In particu-

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26. DR. SEUSS, *THE CAT IN THE HAT COMES BACK* (1958).

27. *Id.* at 37.

28. See Krier & Gillette, *The Un-Easy Case for Technological Optimism*, 84 MICH. L. REV. 405 (1985).

lar, we must change from technologies that assault the environment to ones that are in harmony with it. Rather than continue our use of technologies that necessarily pollute, relying all the while on control breakthroughs to keep total emissions within affordable bounds, we must instead substitute technologies that produce little or no pollution in the first instance. We must rely on solar energy and co-generation rather than conventional and nuclear power plants, we must turn to organic farming, we must abandon petrochemicals, and so on.<sup>29</sup>

That Commoner believes such transformations are manageable is the best indication of his optimistic outlook about technology, as others have discussed at greater length than I need to do here.<sup>30</sup> Commoner by no means wants to halt, or even curb, our rate of economic growth; he aspired, remember, to the American presidency. His ambition, instead, is to "find ways of improving both the economy and the environment," all at the same time.<sup>31</sup>

Since Commoner maintains that there are inherently more efficient ways to produce both consumer goods and environmental goods, it is worth asking why the business community has not adopted them. A good part of the answer can be related in terms of externalities. This term of art is not mentioned in the article in *The New Yorker* but it was in Commoner's 1976 book, *The Poverty of Power*,<sup>32</sup> which once again contains an extended statement of some of the matters discussed in the 1987 article.

The account in each case runs essentially as follows. Business firms are driven by the profit motive. They invest "in those production enterprises which promise to yield the greatest return in the shortest time."<sup>33</sup> This of itself seems innocuous, even beneficial, for few people have been known to object to large returns reaped over a brief period. Commoner himself notes that the markets in which firms operate are thought "to seek out those decisions which make the most efficient use of the available re-

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29. NEW YORKER, *supra* note 1, at 61.

30. See Rubin, *supra* note 4.

31. NEW YORKER, *supra* note 1, at 61.

32. See B. COMMONER, *supra* note 3, at 252. Compare NEW YORKER, *supra* note 1, at 60-61 (social interest in environmental quality not represented in investment decisions).

33. NEW YORKER, *supra* note 1, at 60.



sources.”<sup>34</sup> He adds that ecological processes are also characteristically efficient, so one might suppose that these two systems—the economic and the ecologic—would reinforce each other. And in fact they would, if markets could only operate as they do “in the best of circumstances.”<sup>35</sup> The difficulty is that markets are subject to breakdown. Technology *A* might appear to be more profitable than Alternative *B* only because some of *A*’s costs, though they are visited on the environment, are not brought home to business in the form of price. They remain outside or external to business decisions (hence the term “externalities”), with the result that what is good for American business might not be good at all for American society at large.

The prescription, of course, is to intervene. The government must provide the discipline that the market has not by forcing on business the environmental costs that it otherwise ignores. The government can do this by any number of means, all of which aim at the “internalization of externalities,” perhaps the ugliest terminology ever invented by economists. So the government can ban some pollutants; it can force installation of control devices as to others; more straightforwardly, it can simply tax sources for each unit of pollution emitted.

All such measures have been used (though emission taxes have not been used very much), but, in Commoner’s view, to little effect. We have accomplished so little in part because we rely too much on partial controls and in part because, even as to those, our efforts are too relaxed. We demand insufficient improvements and devote insufficient resources to enforcement. This pattern is, in Commoner’s judgment, the product of corporate power in American politics. Corporate interests are better organized than are the diffuse social interests that have so much to gain from environmental improvement; corporate interests also have a more concentrated stake in the shape and requirements of the nation’s environmental programs. Hence, they are the more effective lobbying force, and the results of this are only too apparent.

Thus far, then, the pieces of Commoner’s assessment add up to this. Substantial environmental gains “can be achieved only if the social need for both environmental quality and economic

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34. *Id.* at 61.

35. *Id.*

growth is allowed to govern the choice of production technology.” At present, though, the corporation is the “institution that largely determines the course of production technology in the United States,” and its interests are fundamentally opposed to significant environmental improvement, which “depends on social rather than private governance of production decisions . . . .”<sup>36</sup> It may even depend on what Commoner elsewhere has called “the S-word: Socialism.”<sup>37</sup>

Commoner’s vision of a desirable socialist enterprise is obscure, but it seems to entail that “the choice of productive technology” be “open to social governance,”<sup>38</sup> meaning that it somehow be made the business of the public at large, rather than the business of business. There are several problems with this prescription, the first of which I shall simply mention in passing. We have no evidence that socialism in one variation or another (including Commoner’s obscure variation of “social governance,” which seems to entail something short of social ownership, but also something beyond conventional democratic control) has generally fared better with the environment than have we. Indeed, most socialist systems seem quite clearly to have fared worse. To this Commoner might of course reply that true socialism, or true “social governance,” exists nowhere on the globe, and that we should not look at corrupted versions as examples. This is probably true enough, but then how can Commoner be so sure that a pure system would work the improvements he imagines? He has no history to draw upon, and for every theory that supports him there is at least one other that does not.

But second, and simply supposing broad social governance of technological choices to be a good thing, how are we to get there? As Commoner sees it, remember, American politics is in the control of corporate interests, and it is hardly in the interest of those interests to hand over the reins of power to people who wish to revolutionize the basic structure of our present economy. Commoner, to his credit, has an answer to this problem, but it is an answer that is itself deeply problematic in several important respects. Of all that Commoner has to say in his 1987 article, what

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36. *Id.* at 61, 62, 64.

37. See Shabecoff, *supra* note 1, at B6; NEW YORKER, *supra* note 1, at 62 (referring to socialism).

38. NEW YORKER, *supra* note 1, at 62.

follows is the part that should receive the closest scrutiny from those otherwise sympathetic to his general assessment.

There is, Commoner says, "no way to reorganize society along ecologically sound lines without directly challenging the powerful, politically conservative forces—more plainly speaking, the corporations—that now control the system of production." Hence, the major environmental organizations in this country "are aware that in order to influence the resolution of environmental issues they need to find a way of participating in the political process."<sup>39</sup> But environmental leaders, confronted by the political power of corporate interests, have "adjust[ed] the goals of environmentalism to the reality of Washington politics," and in the course of that have evaded "the issue of who should govern the choice of productive technology."<sup>40</sup> Rather than challenge, they have, in a word, compromised, in hopes of winning a majority of the Congress. Commoner concedes the case for compromise (How else deal with polluter power?) but also sees the "danger that in the course of negotiating a compromise the environmental organizations will become hostage to the corporations' power," something that Commoner sees happening already.<sup>41</sup>

The dilemma sketched by Commoner is all too apparent: environmentalists might on the one hand choose to be essentially powerless, or on the other to compromise, only to be co-opted. The prevailing political system, it seems, bears a sign reading NO EXIT.

But not for Commoner. Environmental issues, he observes, are larger than they first appear. They encompass not only the quality of the ecological system but also the quality and the justice of the social system—the market for jobs, the conditions of employment, the distribution of life's necessities, the growth of the economy—such that "there is an unbreakable link between the environmental issue and all the other troublesome social issues."<sup>42</sup> In this connection, Commoner draws on the experience of the Green Party in West Germany and in Italy to illustrate how environmentalists can use an enlarged political outlook in order to win political power. The West German Greens, for example,

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39. *Id.* at 66.

40. *Id.* at 66-67.

41. *Id.* at 68.

42. *Id.*

emphasized the dangers of nuclear war in order to attract "peace-oriented voters, who were not necessarily pre-occupied with ecological issues . . . ."43

Commoner goes on to suggest that if the German Greens had been similarly sympathetic to the country's unemployment problems, their political success would have been more long-lasting. Instead, they insisted that the best way to improve the environment was to cut back on industrial activity and, given conditions at the time, this cost them many votes. (In this connection I mention as an aside Commoner's implicit endorsement of scrubbers as a good means of controlling sulfur dioxide emissions. An effective alternative to the extraordinarily expensive approach of scrubbers would mandate reductions in the use of high-sulfur coal, the result of which would work a shift in coal production from Appalachia to the Southwest. Commoner seems to prefer scrubbers out of sympathy for "the miners who would lose their lifelong jobs . . ." Yet note that scrubbers entail the very same partial controls Commoner so roundly condemns, whereas low-sulfur coal represents the sort of straightforward elimination of pollutants he endorses.)44

The West German Greens subsequently suffered a split, the fundamentalists among them insisting on firm adherence to a strictly environmental platform. (The biologist Commoner notes, I am sure with much consternation, that at a recent Green convention one such fundamentalist "pleaded passionately for a resolution condemning the 'slaughter' of thousands of frogs in biology laboratories, comparing it with the Holocaust.")45 The realist faction of the West German Greens, on the other hand, continued to pursue a broader range of political issues, and in Commoner's view seems to have enjoyed more success, at least for a time. He regards the recent history of the West German Greens as "a lively and effective dramatization of the links that tie ecology to economics and both to politics. It also illustrates the ease with which a failure to understand these links properly can lead to a politics that rises in defense of laboratory frogs but not unemployed

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43. *Id.*

44. *Id.* at 67. On the issue of scrubbers, see B. ACKERMAN & W. HASSLER, *CLEAN COAL/DIRTY AIR* (1981).

45. *NEW YORKER*, *supra* note 1, at 68.

workers."<sup>46</sup>

The experience of the Greens in Italy, where environmentalists organized "green lists" of candidates and saw some of them elected to office, is also suggestive for Commoner. Part of the power of the Italian Greens lies in their general leftist orientation, which provides them with a political base—Commoner nicely calls it a "'red-green' situation"<sup>47</sup>—broader than what environmental issues alone could attract. In Italy and West Germany alike, then, the Green Party's recognition of the link between environmental and other social issues advanced their basic political cause. When the link was ignored, losses were suffered.

Commoner sees in this overview of Green politics an obvious lesson for the American environmental movement. That movement, he says, is but one of many implicitly allied movements now underway in the country—for civil rights and peace, for the rights of gays and women, and so on. These various movements have, Commoner believes, enormous political power in the aggregate, but they have diffused it by fragmenting their interests into special ones rather than combining them into a united one. If, as with the Greens, the various social movements in the United States could combine, then they too would enjoy more political power. And Commoner believes they *can* combine because each of their special interests is at its root the same interest, and that interest has to do with the choice of production technology. Like pollution, Commoner suggests, discrimination too originates in corporate boardrooms, as do problems of poverty and crime and violence. Our defense policy, with its implications for world peace, is powerfully influenced from the same location. Only unite, then, around the root theme—Commoner's root theme about the choice of production technology—and there will be some hope not only for a better environment, but for a better world as well.<sup>48</sup>

One of several difficulties with this political strategy is that it ignores principles of political economy that Commoner himself undertook to introduce and apply. Elections in America proceed on a winner-take-all basis; the candidate who draws the largest vote proceeds to office. As Anthony Downs explained some years

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46. *Id.* at 69.

47. *Id.*

48. *Id.* at 69-71.

ago in his book *An Economic Theory of Democracy*,<sup>49</sup> such a system of voting promotes exactly the sort of two-party system we have in the United States, and promotes as well our characteristically conventional politics.

Suppose a typical bell-shaped distribution, of voters, arrayed in terms of their attitudes, with a large cluster of moderates in the middle and then, declining toward each tail of the distribution, the increasingly more extreme leftist and rightist voters. In a winner-take-all system, each candidate for office can usually hope to do best by developing a program in terms of what will prove most attractive to the large collection of moderate voters concentrated at the middle of the distribution. All candidates, then—more generally, all political parties—have incentives to develop moderate programs, in fact almost identical programs, to compete for the median voter. Various politicians have reason to coalesce into alliances—parties—that attract the most votes, and in the nature of things only two parties can readily be accommodated. A third party will either be too unattractive to get sufficient votes and so will languish, or will merge itself into one of the other parties in order to win elections, or will triumph and drive out one of the other parties. The virtually inexorable logic of the system is two parties, each with a platform designed to appeal to the great ideological middle of America.

West Germany and Italy, in contrast, employ variants of proportional representation, according to which a candidate can reach legislative office so long as the candidate wins some minimum number of votes, even though the number is smaller than what was won by other candidates. Obviously, such systems can support radical parties like the Greens (and reactionary parties too) in a way that the American system cannot.

Commoner, I think, overlooks this, and thus proposes a program that would likely give American environmentalists no bread whatsoever, rather than the hard half loaf of compromise. He assumes, as we have seen, that there are myriad (and in this case, somewhat leftist) interest groups in America—for gay rights, women's rights, civil rights, peace, passive energy, and on and on—which are presently rather weak and diffused but which could, were they to unite under Commoner's common cause, have

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49. A. DOWNS, *AN ECONOMIC THEORY OF DEMOCRACY* (1957).

much political power in the aggregate. The problem is that all of these people are, by and large, probably the *same* people: a minority clustered toward the left tail of the bell-shaped distribution of voters; a minority in danger of utter isolation and little power should it follow Commoner's advice despite (or to spite) the firm realities of American politics.

In any event, and as the history of the West German Greens suggests, aggregation—whether for purposes of voting or for purposes of other kinds of political action, such as lobbying—would not be so easy as Commoner apparently believes. Even if we put aside the standard problems of collective action confronted by large and diffuse groups, the fact remains that any given citizen generally has many interests, and there is much potential for conflict. If, for example, environmentalists are asked to support more jobs, this may entail their giving up other goals. If coal miners are asked to support the environmental cause, this in turn could threaten their jobs. Hence the gains of one interest within the larger set result in losses for another, notwithstanding that all the interests might in some general way be concerned with transforming choices about productive technology.

Two points in closing. The foregoing and necessarily very sketchy analysis applies with much less force to state and local politics than it does to national elections. Citizens can vote with their feet as well as with their ballots; they can move to and concentrate in states, even more effectively, localities, known to have a politics of interest, and there they can have considerable political influence of all the familiar sorts. For this reason, among others, states in our country are more likely to be politically extreme, in one direction or the other, than is the country itself, and of towns and cities this is only more the case. Commoner, I am sure, sees this; he notes that the "people living in the polluted communities" have taken what he calls the hard path, demanding that pollution be eliminated, that ineffective controls be abandoned in favor of production techniques that can exist in harmony with nature. The national environmental organizations, in contrast, "have taken the soft political road" of negotiation and compromise.<sup>50</sup> So Commoner, in a little opinion piece in a journal called *Environmental Action*, has argued that local control of economic and environmental decisions would best address our fun-

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50. NEW YORKER, *supra* note 1, at 66-68.

damental ills.<sup>51</sup>

One has to wonder. As Commoner himself acknowledges in talking about global threats to the environment, decisions about modern technology have impacts that reach much beyond the boundaries of local and state governments. A local decision to ban this or that, say a toxic waste dump, is really just a variation on the NIMBY (not-in-my-backyard) problem. That we don't want something in our backyard does not make it go away; instead it moves elsewhere. Similarly, a local decision to accommodate some environmentally hazardous activity, such as a smelter, might be implemented in a fashion that lets the locality enjoy the economic benefits of the activity but export its environmental costs downwind. In short, with respect to many if not most modern environmental problems, local control is altogether too likely to lead once again to the externalities that so rightly disturb Commoner. Now, though, they will be imposed by communities rather than by businesses, by municipal corporations rather than by industrial ones.

The second point that follows from our little exercise in political economy is this: Most important about the collection of voters is not their number but their ideological distribution. In terms of the public will, as opposed to any private citizen's sense of membership in the democratic community, a new franchise is of little interest or consequence if it simply increases the voting population but does not alter its political array. In this sense, extending the suffrage to blacks (and perhaps also to women) was much more momentous than its more recent extension to eighteen-year olds, who seem to range over the spectrum much as their elders do. What, then, might change the distribution of voters in America, such that more move to the left and thus give Commoner's political program a higher likelihood of success? From the standpoint of the environment, at least, my own guess is that only dramatic events, ones even more catastrophic than our recent harvest of calamities, could accomplish this. Hence I worry that the political and economic dreams of Barry Commoner could be realized only at the cost of a nightmare. And even then, the dreams would hardly be all that Commoner imagines.

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51. Commoner, *Decentralized Control Makes Economic Sense*, ENVTL. ACTION, Jan. 1981, at 7.