Commoner then describes the underlying source of the problem: changes in technologies since World War II. He analyzes modern industrial manufacturing technology, then agriculture, then transportation, then energy systems. In each case he shows that the new production techniques do not produce new products (with a few exceptions, such as TV, computers, video tape, and some pharmaceuticals). What they produce is old, familiar products using new production techniques do not make new products (with a few exceptions). What they produce is old, familiar products using new production techniques do not make new products (with a few exceptions). What they produce is old, familiar products using new production techniques do not make new products (with a few exceptions).

What will it take to solve these worsening problems? It will first require the environmental movement to face the fact that pollution is the only way even though pollution prevention will be politically tough to achieve because it runs directly counter to the main goal of industry, which is to maximize profit in the short term. Non-polluting technologies do not necessarily return high profits in the short term, so industrial leaders bent on maximizing short-term profits will stubbornly oppose the changeover to nonpolluting technologies. We must face the fact that environmental quality and profits will stubbornly oppose the changeover to nonpolluting technologies, returning to earlier, more profitable, less-polluting technologies, so we could return to the earlier technologies and reduce our destruction of the planet. Commoner is certainly not a Luddite seeking the abandonment of all modern amenities; but he argues that we must give up some modern technologies, returning to earlier ones, if we are to end our self-destructive war against nature.

Commoner provides ballpark estimates of the dollar costs of restructuring American industry and he shows that the transformation of our basic industrial system will be expensive but affordable, if we cut military spending. Worldwide, military spending will need to be cut about in half, he estimates. He points out that the most productive economy in the world is that of Japan, where military expenditures are 1% of gross national product (GNP) or less; in the U.S., we spend 7% of GNP on the military. Japan uses 30% of its GNP as business investment capital; the U.S. uses only 16% of GNP that way. Reducing the military budget will free up needed capital for the necessary transformation of the U.S. industrial base.

Most wars today are fought in the third world, fueled by residual cold war ideological disputes, and made possible by arms shipments from U.S. and U.S.S.R. to both sides. Some 25 million people have died in wars since World War II—the vast majority of them in third world countries. Equitable and ecologically compatible development of the third world is essential, if wars are to be reduced and avoided.

What is to be done? Commoner argues that any environmental problem has three components: a polluting technology, per-person use of that technology, and the number of people involved. By examining several representative cases, he shows that the real problem is modern technology, not the size of the human population and not per-capita consumption. Commoner believes it is important to reach agreement on the nature of the problem before we can build a movement to implement solutions. Size of the human population is not the most important component of the problem; by far, the largest contributor to global destruction is the technologies that humans employ, he shows.

Commoner then demonstrates that ecologically sound alternative technologies already exist in most cases. Successful, non-chemical agricultural techniques exist; affordable ways to harness solar energy exist; low-pollution transportation systems exist; modern chemical technologies almost represent substitutes for earlier, less-polluting technologies, so we could return to the earlier technologies and reduce our destruction of the planet. Commoner is certainly not a Luddite seeking the abandonment of all modern amenities; but he argues that we must give up some modern technologies, returning to earlier ones, if we are to end our self-destructive war against nature.

Commoner shows that even ecologically sound technologies can be misused and misapplied by individuals bent on maximizing short-term profits, so he argues that our systems for controlling technological choices must embrace social goals as well as the goals of individuals and corporations. He also warns that we must keep in mind three general goals for any technological decision: (a) to prevent local pollution and destruction; (b) to prevent potential worldwide effects (global warming or ozone depletion, for example); and (c) to accelerate ecologically sound economic development in the third world. "If these goals are approached piecemeal, there is the danger that the method used to reach one of them will interfere with the others," Commoner points out. His emphasis on third world development is central to his global blueprint for solving the environmental crisis. We cannot achieve peace with the planet unless we achieve peace among the inhabitants of the planet, he argues, and gross economic disparities between the northern and southern hemispheres are a key source of conflict.

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In sum, "substantial environmental improvement can only occur when the choice of production technologies is open to social intervention... [so] we must find suitable ways to implement the social governance of production," Commoner says.


--Peter Montague

Descriptor terms: barry commoner; making peace with the planet; overviews; agendas; transportation; energy; manufacturing; petrochemical industry; agriculture; fertilizer; pesticides; plastics; air pollution; water pollution; regulation; economics; conversion; developing countries; ethics; social control; production; accountability; military; waste reduction;