

Clashing Views on Controversial Environmental Issues

Theodore D. Goldfarb



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4th edition

Edited, Selected, and with Introductions by

Theodore D. Goldfarb

State University of New York at Stony Brook

The Dushkin Publishing Group, Inc.

This book is dedicated to my children and all other children for whom the successful resolution of these issues is of great urgency.

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PREFACE

For the past fourteen years I have been teaching an environmental chemistry course, and my experience has been that the critical and complex relationship we have with our environment is of vital and growing concern to students, regardless of their majors. Consequently, for this fourth edition, I have redoubled my efforts to shape issues and to select articles that do not require a technical background or prerequisite courses in order to be understood. For example, in addition to the sciences, this volume would be appropriate for such disciplines as philosophy, law, sociology, political science, economics, and allied health—any course where environmental topics are addressed.

Faculty are divided about whether it is appropriate to use a classroom to advocate a particular position on a controversial issue. Some believe that the proper role of a teacher is to maintain neutrality in order to present the material in as objective a manner as possible. Others, like myself, find that students rarely fail to recognize their instructors' points of view. Rather than reveal which side I am on through subtle hints, I prefer to be forthright about it, while doing my best to encourage students to develop their own positions, and I do not penalize them if they disagree with my views. No matter whether the goal is to attempt an objective presentation or to encourage advocacy, it is necessary to present both sides of any argument. To be a successful proponent of any position, it is essential to understand your opponents' arguments. The format of this text, with thirty-six essays arranged in pro and con pairs on eighteen environmental controversies, is designed with those objectives in mind.

In the *introduction* to each issue, I present the historical context of the controversy and some of the key questions that divide the disputants. The *postscript* that follows each pair of essays includes comments offered to provoke thought about aspects of the issue that are suitable for classroom discussion. A careful reading of my remarks may reveal the positions I favor, but the essays themselves and the *suggestions for further reading* in each postscript should provide the student with the information needed to construct and support an independent perspective.

Changes to this edition This fourth edition has been considerably revised and updated. There are three completely new issues: Earth Day 1970 v. 1990: Has the Environmental Movement Been a Success? (Issue 1); Can Current Pollution Strategies Improve Air Quality? (Issue 6); and Is Brazil Serious About Preserving Its Environment? (Issue 15). For four of the issues retained from the previous edition, the issue question is similar to what appeared in the previous editions, but both selections have been replaced in order to more sharply focus the debate and bring it up to date: the issue on hazardous

waste (Issue 12); the issue on municipal waste (Issue 13); the issue on global warming (Issue 16); and the issue on the ozone depletion problem and the Montreal Protocol (Issue 17). I have replaced one or the other of the YES and NO selections in many of the issues retained from the previous edition. The overall result is that about half of the thirty-six selections are new.

A word to the instructor An Instructor's Manual with Test Questions (multiple-choice and essay) is available through the publisher for the instructor using Taking Sides in the classroom. Also available is a general guidebook, called Using Taking Sides in the Classroom, which has general suggestions for adapting the pro-con approach in any classroom setting.

Acknowledgments I received many helpful comments and suggestions from friends and readers across the United States and Canada. Their suggestions have markedly enhanced the quality of this edition and are reflected in the new issues and the updated selections.

Special thanks go to those who responded to the questionnaire with specific suggestions for the fourth edition:

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> Theodore D. Goldfarb Stony Brook, NY

INTRODUCTION

The Environmental Movement

Theodore D. Goldfarb

ENVIRONMENTAL CONSCIOUSNESS

On April 22, 1990, 200 million people in 140 countries around the world participated in a variety of activities to celebrate Earth Day, an event given wide publicity by the media. The date chosen was the anniversary of the first Earth Day (celebrated only in the United States), which many social historians credit with spawning the ongoing global environmental movement. The intervening years have witnessed explosive growth in political, scientific and technical, regulatory, financial, industrial, and educational activities related to an ever-expanding list of environmental problems. We have learned that industrial development has reached such a level that its polluting by-products threaten not only local environments, but also the global ecosystems that control the Earth's climate and the ozone shield that filters out potentially lethal solar radiation. The elevation of environmental concern to a prominent position on the international political agenda has lead to recent speculation by some social commentators that the world is entering "the decade—or even the era— of the environment."

THE HISTORY OF ENVIRONMENTALISM

The current interest in environmental issues in the United States has its historical roots in the conservation movement of the late nineteenth and early twentieth centuries. This earlier, more limited, recognition of the need for environmental preservation was a response to the destruction wrought by uncontrolled industrial exploitation of natural resources in the post-Civil War period. Clear-cutting forests, in addition to producing large devastated areas, resulted in secondary disasters. Bark and branches left in the cutover areas caused several major midwestern forest fires, which leveled villages and killed thousands of people. Severe floods were caused by the loss of trees which previously had helped to reduce surface water runoff. The Sierra Club and the Audubon Society, the two oldest environmental organizations still active today, were founded around the turn of the century and helped to organize public opposition to the destructive practice of exploiting resources. Mining, grazing, and lumbering were brought under government control by such landmark legislation as the Forest Reserve Act of 1891 and the Forest Management Act of 1897. Schools of forestry were established at several of

the land grant colleges to help develop the scientific expertise needed for the wise management of forest resources.

Compared to this earlier period of concern about the misuse of natural resources, which developed gradually over several decades, the present environmental movement had an explosive beginning. When Rachel Carson's book Silent Spring appeared in 1962, its emotional warning about the inherent dangers in the excessive use of pesticides ignited the imagination of an enormous and disparate audience (e.g., wildlife lovers, health care professionals, hunters, and farmers) who had become uneasy about the proliferation of new synthetic chemicals in agriculture and industry. The atmospheric testing of nuclear weapons began to cause widespread public concern about the effects of nuclear radiation. City dwellers were beginning to recognize the connection between the increasing prevalence of smoky, irritating air and the daily ritual of urban commuter traffic jams. The responses to Carson's book included not only a multitude of scientific and popular debates about the issues she had raised, but also a ground swell of public support for increased environmental controls over all forms of pollution.

The rapid rise in the United States of public concern about environmental issues is apparent from the results of opinion polls. Similar surveys taken in 1965 and 1970 showed an increase from 17 to 53 percent in the number of respondents who rated "reducing pollution of air and water" as one of the three problems they would like the government to pay more attention to. By 1984, pollster Louis Harris was reporting to Congress that 69 percent of the public favored making the Clean Air Act more stringent. A poll taken for the 1988 presidential election revealed that 73 percent of the population consider themselves to be "environmentalists."

The growth of environmental consciousness in the United States swelled the ranks of the older voluntary organizations, such as the national Wildlife Federation, the Sierra Club, the Isaac Walton league, and the Audubon Society, and has led to the establishment of more than 200 new national and regional associations and 3,000 local ones. The newer organizations pursue a more activist agenda and tend to use more aggressive methods than their precursors. Such national and international groups as the Environmental Defense Fund, Friends of the Earth, the National Resources Defense Council, Environmental Action, the League of Conservation Voters, and Zero Population Growth have developed considerable expertise in lobbying for legislation, influencing elections, and litigating in the courts. Critics of the environmental movement have frequently pointed out that the membership of these organizations comes from the upper socioeconomic classes. While acknowledging this is true, environmentalists deny that the causes they champion are elitist, and they cite evidence that most of their goals are supported by majority sentiment among people from all walks of life. It cannot be denied, however, that the effects on health and quality of life that result from pollution tend to be a heavier burden for the poor.

THE ENVIRONMENTAL MOVEMENT

Environmental literature has also grown exponentially since the appearance of *Silent Spring*. Many new popular magazines, technical journals, and organizational newsletters devoted to environmental issues have appeared, as well as hundreds of books, some of which, like Paul Ehrlich's *The Population Bomb* (1968) and Barry Commoner's *The Closing Circle* (1972), have become best-sellers.

CLASHING VIEWS FROM CONFLICTING VALUES

As with all social issues, those on opposite sides of environmental disputes have conflicting personal values. On some level, almost everyone would admit to being concerned about threats to the environment. However, enormous differences exist in individual perceptions about the seriousness of some environmental threats, their origins, their relative importance, and what to do about them. In most instances, very different conclusions can be expressed on these issues, conclusions based on evaluations of the same basic scientific evidence.

What, then, are these different value systems which produce such heated debate? Some are obvious: An executive of a chemical company has a vested interest in placing greater value on the financial security of the company's stockholders than on the possible environmental effects of the company's operation. He or she is likely to interpret the potential health effects of what comes out of the plant's smokestacks or sewer pipes differently than would a resident of the surrounding community. These different interpretations need not involve any conscious dishonesty on anyone's part. There is likely to be sufficient scientific uncertainty about the pathological and ecological consequences of the company's effluents to enable both sides to reach very different conclusions from the available "facts."

Less obvious are the value differences among scientists which can divide them in an environmental dispute. Unfortunately, when questions are raised about the effects of personal value systems on scientific judgments, the twin myths of scientific objectivity and scientific neutrality get in the way. Neither the scientific community nor the general population appear to understand that scientists are very much influenced by subjective, value-laden considerations and will frequently evaluate data in a manner that supports their own interests. For example, a scientist employed by a pesticide manufacturer may be less likely than a similarly trained scientist working for an environmental organization to take data that shows that one of the company's products is a low-level carcinogen in mice and interpret that data to mean that the product therefore poses a threat to human health.

Even self-proclaimed environmentalists frequently argue over environmental issues. Hunters, while supporting the prohibition of lumbering and mining on their favorite hunting grounds, strongly oppose the designation of these regions as wilderness areas because that would result in the prohibition of the vehicles they use to bring home their bounty. Also opposed to

wilderness designation are foresters. Although they share many of the environmental goals of preservationists, foresters believe that forest lands should be scientifically managed rather than left alone to evolve naturally.

Political ideology can also have a profound effect on environmental attitudes. Those critical of the prevailing socioeconomic system are likely to attribute environmental problems to the industrial development supported by that system. Others are likelier to blame environmental degradation on more universal factors, such as population growth.

Changes in prevailing social attitudes influence public response to environmental issues. The American pioneers were likely to perceive their natural surroundings as being dominated by hostile forces that needed to be conquered or overcome. This attitude clearly extended to the human inhabitants, as well as the flora and fauna, native to the lands the pioneers were claiming for their own. The notion that humans should conquer nature has only slowly been replaced by the alternative view of living in harmony with the natural environment, but the growing popularity of the environmental movement evidences the public's acceptance of this goal.

PROTECTING THE ENVIRONMENT

There has always been strong resistance to regulatory restraints on industrial and economic activity in the United States. The most ardent supporters of our capitalist economy argue that pollution and other environmental effects have certain costs and that regulation will take place automatically through the marketplace. Despite mounting evidence that the social costs of polluted air and water are usually external to the economic mechanisms affecting prices and profits, prior to the 1960s, Congress imposed very few restrictions on the types of technology and products industry could use or produce.

As noted above, the turn-of-the-century conservation movement did result in legislation restricting the exploitation of lumber and minerals on federal lands. In response to public outrage over numerous incidents of death and illness from adulterated foods, Congress established the Food and Drug Administration (FDA) in 1906, but gave it only limited authority to ban products that were obviously harmful or improperly labeled.

Regulatory Legislation

The environmental movement of the 1960s and 1970s produced a profound and controversial change in the political climate concerning regulatory legislation. Concerns such as the proliferation of new synthetic chemicals in industry and agriculture, the increased use of hundreds of inadequately tested additives in foods, and the effects of automotive emissions were pressed on Congress by increasingly influential environmental organizations. Beginning with the Food Additives Amendment of 1958, which required FDA approval of all new chemicals used in the processing and marketing of foods, a series of federal and state legislative and administrative

actions resulted in the creation of numerous regulations and standards aimed at reducing and reversing environmental degradation.

Congress responded to the environmental movement with the National Environmental Policy Act of 1969. This act pronounced a national policy requiring an ecological impact assessment for any major federal action. The legislation called for the establishment of a three-member Council on Environmental Quality, responsible to the president, to initiate studies, make recommendations, and prepare an annual Environmental Quality Report. It also requires all agencies of the federal government to prepare a detailed environmental impact statement (EIS) for any major project or proposed legislation in which they are involved. Despite some initial attempts to evade this requirement, court suits by environmental groups have forced compliance, and now, new facilities like electrical power plants, interstate highways, dams, harbors, and interstate pipelines can only proceed after preparation and review of an EIS.

Another major step in increasing federal anti-pollution efforts was the establishment in 1970 of the Environmental Protection Agency (EPA). Many programs previously administered by a variety of agencies, such as the departments of the Interior, Agriculture, and Health, Education and Welfare, were transferred to this new, central, independent agency. The EPA was granted authority to do research, propose new legislation, and implement and enforce existing laws concerning air and water pollution, pesticide use, radiation exposure, toxic substances, solid waste, and noise abatement.

The year 1970 also marked the establishment of the Occupational Safety and Health Administration (OSHA), the result of a long struggle by organized labor and independent occupational health organizations to focus attention on the special problems of the workplace. A major responsibility of OSHA is the enforcement of legislation regulating the workplace environment. The thousands of synthetic chemicals used in modern industrial activity—most of which have not been tested for effects of chronic exposure—make this task extremely difficult.

The first major legislation to propose the establishment of national standards for pollution control was the Air Quality Act of 1967. The Clean Air Act of 1970 specified that ambient air quality standards were to be achieved by July 1, 1975 (a goal that was not met and remains elusive), and that automotive hydrocarbon, carbon monoxide, and nitrogen oxide emissions were to be reduced by 90 percent within five years—a deadline that has been repeatedly extended. Specific standards to limit the pollution content of effluent wastewater were prescribed in the Water Pollution Control Act of 1970. The Safe Drinking Water Act of 1974 authorized the EPA to establish federal drinking water standards, applicable to all public water supplies. The Occupational Safety and Health Act of 1970 allowed OSHA to establish strict standards for exposure to harmful substances in the workplace. The Environmental Pesticide Control Act of 1972 gave the EPA authority to regulate pesticide use and to control the sale of pesticides in interstate commerce. In

1976, the EPA was authorized to establish specific standards for the disposal of hazardous industrial wastes under the Resource Conservation and Recovery Act—but it wasn't until 1980 that the procedures for implementing this legislative mandate were announced. Finally, in 1976, the Toxic Substance Control Act became law, providing the basis for the regulation of public exposure to toxic materials not covered by any other legislation.

All of this environmental legislation in such a short time span produced a predictable reaction from industrial spokespeople and free-market economists. By the late 1970s, attacks on what critics referred to as over-regulation appeared with increasing frequency in the media. Anti-pollution legislation was criticized as a principal contributor to inflation and a serious impediment to continued industrial development.

One of the principal themes of Ronald Reagan's first presidential campaign was a pledge to get regulators off the backs of entrepreneurs. He interpreted his landslide victory in 1980 to mean that the public supported a sharp reversal of the federal government's role as regulator in all areas, including the environment. Two of Reagan's key appointees were Interior Secretary James Watt and EPA Administrator Ann Gorsuch Burford, both of whom set about to reverse the momentum of their agencies with respect to the regulation of pollution and environmental degradation. It soon became apparent that Reagan and his advisors had misread public attitudes. Sharp staffing and budget cuts at the EPA and OSHA produced a counterattack by environmental organizations whose membership rolls had continued to swell. Mounting public criticism of the neglect of environmental concerns by the Reagan administration was compounded by allegations of misconduct and criminal activity against environmental officials, including Ms. Burford, who was forced to resign. President Reagan attempted to mend fences with environmentalists by recalling William Ruckelshaus, the popular first EPA Administrator, to again head the agency. But throughout Reagan's presidency, few new environmental initiatives were carried out.

During his presidential election campaign, George Bush recognized the public's growing concern with threats to the environment and impatience with the federal government's lack of progress. He entered office pledging to reestablish a strong federal role in dealing with the environmental issues. Recent opinion polls have assessed his record thus far as being heavier on rhetoric than on action.

RECENT DEVELOPMENTS

The differences between the 1970 and 1990 versions of Earth Day in terms of numbers of participants, global involvement, scope of issues considered, and strategies proposed reflect significant changes that have occurred during the environmental movement.

For a comprehensive examination of current environmental developments and a look at what Earth Day 1990 signified and accomplished for the

environmental movement, see Issue 1 (Earth Day 1970 v. 1990: Has the Environmental Movement Been a Success?). In that issue, the effects of the environmental movement are debated and a critical examination of Earth Day is offered. Many writers and social critics, environmentalists, and policymakers saw in Earth Day 1990 an opportunity to assess the environmental movement and make recommendations for the future direction of environmentalism. The April 30, 1990, issue of The Nation contains two critiques of present environmental developments. In the first, "Ending the War Against Earth," Barry Commoner summarizes the principal theme of his recent book Making Peace with the Planet (Pantheon, 1990). He proposes that little will be accomplished by merely limiting the pollution produced by existing technology. Instead, he calls for redesigning industrial, agricultural, and transportation systems so that they will be environmentally benign and harmonious with the ecosphere. The other article, "The Trouble with Earth Day," by author and social critic Kirkpatrick Sale, presents four fundamental criticisms of the agenda of Earth Day 1990 organizers. Sale contends that the focus on individual action is misguided because most environmental problems are a result of inappropriate systems of production or policies of governments or institutions that cannot be altered or reversed by each of us acting individually to adopt a more ecological life-style. Second, he complains about the decision to use most of the \$3 million and unlimited publicity to put on a "week-long media bash" rather than to organize a longrange campaign with a continuing political thrust. Third, he accuses the organizers of having added support by accepting as partners many of the corporations, politicians, and lobbvists who have helped create existing problems. By doing so, Earth Day organizers have eliminated any possibility of developing a clear analysis of what needs to be done. Finally, Sale points to the narrow anthropocentric focus on human peril rather than a more appropriate ecocentric perspective that would identify the solutions as those that would begin to restore the balance of the Earth's natural systems.

Organizations such as Earth First! and the radical wings of various "green" political movements as well as other proponents of "deep ecology" are even more critical of the strategies linked to Earth Day. This fringe of the environmental movement proposes such radial goals as a return to a much simpler, less technological life-style and a drastic reduction of the present world human population. For an introduction to the policies, philosophies, and recent activities of these "ecorads," read "Radical Ecology on the Rise," by Brian Tokar, "Earth First! and Cointelpro," by Leslie Hemstreet—both in the July/August issue of *Z Magazine*—and "Earth First!ers Wield a Mean Monkey Wrench," by Michael Parfit, *Smithsonian* (April 1990).

Members of the present environmental establishment have offered their own agendas for the future. In the July/August issue of *EPA Journal*, William K. Reilly, administrator of the EPA, presents proposals in "The Greening of EPA" for the greater use of economic incentives to prevent pollution before it occurs. James Gustave Speth, former EPA administrator and current presi-

dent of the World Resources Institute, calls for a greater emphasis on international problems and a reorganization of the EPA along lines that would enable it to promote far-reaching technological change in his article "EPA and the World Clean-up Puzzle."

Professor of political science and public and environmental affairs Lynton K. Caldwell was one of the principal authors of the National Environmental Policy Act (NEPA) of 1969, which established the basic legislative environmental philosophy and policy under which the EPA and other U.S. governmental agencies have been operating. He now thinks that a constitutional amendment is needed to place environmental protection within the country's fundamental law, as has been done by such other nations as Brazil, China, West Germany, the Netherlands, Sweden, and Switzerland. The December 1989 issue of *Environment* includes Caldwell's article "A Constitutional Law for the Environment—20 Years with NEPA Indicates the Need," as well as several reactions to his proposal and Caldwell's response in the Commentary section.

GLOBAL DEVELOPMENTS

Although initially lagging behind the United States in environmental regulation, other developed industrial countries have been moving rapidly over the past decade to catch up. In a few European countries where "green parties" have become influential participants in the political process, certain pollutant emission standards are now more stringent than their U.S. counterparts. Environmental planning and control are prominent among the controversial issues being debated by the European Economic Community.

While the feeding and clothing of their growing populations continue to be the dominant concerns of developing countries, they too are paying increasing attention to environmental protection. Suggestions that they forgo the use of industrial technologies that have resulted in environmental degradation in developed countries are often viewed as an additional obstacle to the goal of raising their standard of living.

During the past decade, attention has shifted from a focus on local pollution to concern about global environmental degradation. Studies of the potential effects of several gaseous atmospheric pollutants on the Earth's climate and its protective ozone layer have made it apparent that human activity has reached a level that can result in major impacts on the planetary ecosystems. A series of major international conferences of political as well as scientific leaders have been held with the goal of seeking solutions to threatening worldwide environmental problems. Serious discussions are under way about how to guide future development so as to avert or minimize the threats while satisfying the frequently conflicting socioeconomic needs of the developed and developing nations.

New Approaches

An evaluation of the apparent failure to control environmental decay in the past two decades has given rise to demands for new approaches. Environmental policy analysts have proposed that regulatory agencies adopt a more holistic approach to environmental protection, rather than continuing their attempts to impose separate controls on what are actually interconnected problems. The use of economic strategies, such as pollution taxes or the sale of licenses to those who wish to produce limited quantities of pollutants, has received increasing support as potentially more effective than regulatory emission standards. Such suggestions continue to enrage many environmentalists who consider the sale of pollution rights to be unethical. An increasing number of environmental activists are questioning the entire approach of controlling or limiting the amount of pollution produced by existing technologies. They point out that both population growth and increasing worldwide industrial development will result in increasing total quantities of pollutants released despite attempts to reduce the impact of pollution from current, specific sources. Instead, they propose replacing our entire systems of energy production, transportation, and industrial technology with systems that are designed to produce a minimal negative environmental impact.

A new militant wing, Greenpeace, has sprung up within the environmental movement. Greenpeace first received widespread media attention for its actions designed to block the French atmospheric nuclear testing program. As a result of highly successful membership recruiting and fund-raising efforts, it has become the most powerful international grassroots environmental organization. More radical still are the politics and tactics of other "green" organizations such as Earth First! During a 1990 campaign they called Redwood Summer, members chained themselves to trees to prevent the cutting of redwood trees in the ancient forests of northern California. The eco-radicals who constitute the small, but growing, extreme fringe of the environmental movement advocate such policies as a drastic reduction in the world's population and a return to much simpler, less materialistic life-styles.

ECOLOGY AND ENVIRONMENTAL STUDIES

Efforts to protect the environment from the far-reaching effects of human activity require a detailed understanding of the intricate web of interconnected cycles that constitute our natural surroundings. The recent blossoming of ecology and environmental studies into respectable fields of scientific study has provided the basis for such an understanding. Traditional fields of scientific endeavor like geology, chemistry, or physics are too narrowly focused to successfully describe a complex ecosystem. Thus, it is not surprising that chemists and entomologists who helped promote the use of DDT and other pesticides failed to predict the harmful effects that accumulation of these substances in biological food chains had on birds and marine life.

Ecology and environmental studies involve a holistic study of the relationships among living organisms and their environment. It is clearly an ambitious undertaking, and ecologists are only beginning to advance our ability to predict the effects of human intrusions into natural ecosystems.

It has been suggested that our failure to recognize the potentially harmful effects of our activities is related to the way we lead our lives. Industrial development have produced life-styles which separate most of us from direct contact with the natural systems upon which we depend for sustenance. We buy our food in supermarkets and get our water from a kitchen faucet. We tend to take the availability of these essentials for granted until something threatens the supply. It has been claimed that native peoples who lived off the land were more "in touch with nature" and were thus not likely to pollute their environment. This supposition has been discredited by studies showing that the practices of many Native American tribes, despite their generally greater respect for nature, seriously damaged the ecological systems on which they depended. It is unlikely that any people ever set about to intentionally poison their own nests. What clearly distinguishes our society from that of our forebears is the increased capability to employ technology in ways that ultimately result in environmental degradation.

SOME THOUGHTS ON NUCLEAR WEAPONS AND INTERNATIONAL COOPERATION

Most environmental textbooks fail to include any discussion of the enormous ecological devastation that would result from a war involving nuclear weapons. A chilling analysis of the likely environmental effects of a nuclear war is presented in Jonathan Schell's *The Fate of the Earth* (1982). Schell describes the likely destruction of the protective ozone layer, radioactive contamination of the food chain, long-term hazards from radioactive fallout, and a host of other catastrophic environmental consequences of a major nuclear war. In 1983, a nightmarish prediction emerged from a study by a group of eminent scientists that included Carl Sagan and Paul Ehrlich. They theorized that a worldwide "nuclear winter" would result from even a limited nuclear war and that the long-term consequences could be so devastating as to threaten the continued existence of human civilization.

The prevention of nuclear war obviously requires an unprecedented degree of international agreement and cooperation. Many environmental problems such as ozone destruction and climate modification can also result in devastating worldwide effects unless the people of the world can convince their leaders to set aside their usual nationalistic perspectives when facing these problems. Let us hope that the prospect of worldwide environmental catastrophe will help stimulate the political forces and perspectives needed to prevent the ultimate destruction of the Earth and its people.

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