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## The Theology of Ecology: A Bibliographical Analysis

Dwight Urbane Nelson

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THE THEOLOGY OF ECOLOGY:  
A BIBLIOGRAPHICAL ANALYSIS

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A Thesis  
Presented to  
the Faculty of the Graduate School  
Western Evangelical Seminary

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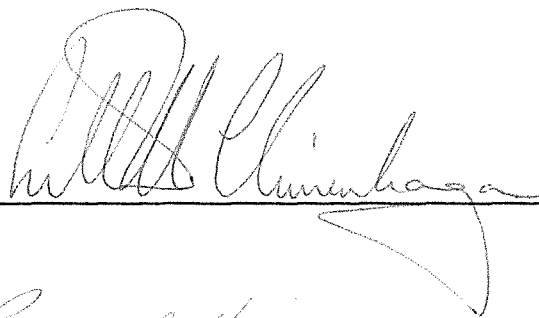
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of the Requirements for the Degree  
Master of Divinity

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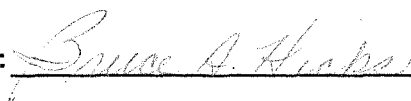
by  
Dwight Urbane Nelson  
May 1973

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## Chapter 1

### INTRODUCTION

In this day of fads, causes, and avant-garde philosophies, the current ecologic crisis is a viable issue. It is no longer possible to confine it to the realm of academic debate or to the bylaws of some esoteric conservationist society; the critical balance between organism and environment is a factor every man must seriously consider. Scientists are now saying that there is no place on earth where the ravages of pollution and environmental misuse have not grossly affected this crucial relationship. Pollution, a reaction which injects foreign substances into the environment as well as removing necessary elements, touches everyone. Men are at the same time polluters and sufferers from pollution. Today, it is certain that pollution adversely affects the quality of human life. In the future, it may affect its duration.

### THE PROBLEM

The church today faces a new task, namely how to encourage a greater sense of responsibility for the natural environment. Mankind is in the midst of a global environmental crisis. The best ecologists are telling man that he has only a few years to solve the problems of overpopulation and environmental pollution if he is to preserve any kind of quality existence on this planet. The depressing details of the crisis increasingly are being documented by the scientific, social, and religious news media of the day. It is becoming more and more clear that man will not be able to solve the environmental crisis simply by developing new and better technologies. In fact, he is not presently making use of nearly all the technological know-how at his disposal right now for dealing with

environmental pollution. The problem is really not technological at all; it is much deeper than that. It is a human problem. It is a question of basic values, and cultural, economic, and religious commitments.

### Statement of the Problem

Now that the scientists and the secular media have made the details of the ecological crisis familiar to all, a number of theologians have attempted to relate theology meaningfully to the problem. But, like their scientific counterparts, the theologians have found that the principle of interrelatedness prohibits the fashioning of any easy answers. In other words, one cannot simply say that the root problem of the ecological crisis is a spiritual one without duly analyzing and documenting such a hypothesis.

Originally this writer had proposed to write a thesis on the theology of ecology, but this endeavor proved to be too ambitious and, perhaps, somewhat premature. It was felt that a more logical first step would be to bring together the various theological voices speaking out on the issue of ecology and consolidate their findings. The underlying logic for this was that one must be thoroughly acquainted with the current state of the literature before any original or lasting contribution can be made.

As a result, this study has focused upon the problem of the essential content of contemporary religious literature as it relates to the development of a theology of ecology. Attention has been given to what is being said; who is saying it; and why it is important that it is said at all.

### Justification of the Problem

It was Adlai Stevenson who once said, "'We travel together, passengers on a little space ship, dependent on its vulnerable supplies of air and soil, . . . preserved from annihilation only by the care, the work, and



the love we give our fragile craft.'"<sup>1</sup> This discerning comment succinctly expresses the dilemma confronting all of mankind and especially the church. For the church which has long been concerned with the character and fate of the "passengers" must now, in their interest, turn its attention to the health of the "craft"--for passenger and craft. But how? Upon what golden insight is the church to move forward and recapture ground that has been lost because of ecologic ignorance? The point is, a theological perspective or ethic is needed now more than ever before; not just a theology of the interim as an appeasement to momentary concern, but an ethic of involvement which as a clarion would rally the forces and point the way toward implementing that ethic. On the premise that understanding is basic to acting out one's beliefs, a bibliographical analysis of selected religious and theological literature will be presented in an effort to give direction towards the development and implementation of environmental stewardship.

#### Limitation of the Study

The scientific intricacies of man's relation to his environment, such as environmental health factors, kinds and types of pollutive agents, or environmental management and control, are a part of this research paper only in a cursory fashion as they help to establish the ecological crisis as a viable social concern, and as such they appear in chapter two, "Ecology Crisis." The study as such, then, does not purport to be a scientific analysis of the causes or extent of the current ecological crisis.

Neither is it the purpose and intent of this writer to provide the public with a methodological catalogue for servicing the physical symptoms of its environmental dilemma.

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<sup>1</sup>Robert Anderson, "An Ecological Conscience for America," Social Action, XXXIV (May, 1968), 20.

Nor is this paper to be a bibliographical essay per se in which the historical development of a theology of ecology is narrated through the successive contribution of selected authors and their writings.

Rather, this paper is to present the results of a careful analysis of selected, contemporary religious literature dealing with the various component parts of a theology of ecology. No attempt has been made to label the various authors and contributors theologically, or evaluate their work in light of an already established eco-theology, except where such factors have already been clearly enunciated by the writers themselves. The reason for this is that the writers in this area are new voices theologically and the validity of their work has not been tried by the passing of time; also, the church has no clearly defined eco-theology through which to scrutinize their work.

#### Definition of Key Terms

In this study ecology has been taken to mean the study of the whole human environment. More specifically, it refers to the breadth of meaning of man's most significant relationships; e.g., his relationship to God, to others, to nature, and to himself. It teaches us that man is not isolated from his surroundings.

Ecological crisis is used to define the crucial relationship that now exists between man and the environment; not from the standpoint of scientific and social imbalances but from the perspective that the present situation is largely the result of covering up and neglecting prior biblical and theological responsibilities and commitments.

The question of perception and values is an essential part of ecological ethics; e.g., what do people see when they look at the land? What values do they attach to what they see? Is it something only to be used or exploited, or does it have some inherent value and as such become worthy of responsible care and use?

Environmental stewardship is taken to mean the renaissance of environmental responsibility based upon the realization that man was created in God's image to order, maintain, protect, and care for nature, not shamefully abuse it.

Ecological theology or eco-theology as it is sometimes called, is the movement to clearly define man's relationship to the natural world through a study of the biblical doctrines of creation, sin, nature, the incarnation, redemption, and stewardship. Such a theology will also have to take into account God's covenant relationship to the good universe that He created.

#### SOURCES OF DATA

Primary sources for the present study were acquired directly through library research and indirectly by means of correspondence with resource persons, and the publishers of several religious journals and periodicals. Letters of personal correspondence were received from Dr. Conrad Bonifazi of the Pacific School of Religion; Dr. Richard A. Baer, Jr., Associate Professor at the Earlham School of Religion; and Dr. Carl H. Reidel, now Director of the Environmental Program at the University of Vermont. The information received from these informants dealt primarily with the theological aspects of the current environmental crisis.

Thirteen letters were sent to the publishers of those religious journals and periodicals whose publications were not retrievable through the holdings of any local libraries. These included: Modern Churchman; Southwestern Journal of Theology; Church and Society; Church Quarterly; Brethren Life and Thought; Theological Studies; Frontier; Drew Gateway; Lutheran Quarterly; The Mennonite; Dialog; Zygon: Journal of Religion and Science; and the American Ecclesiastical Review. This search led to the recovery of nineteen separate periodical articles which were subsequently assimilated into the bibliography of this paper. A total of

sixty-eight periodicals were used. Such abundant usage of periodical information has been due to the fact that the general field of ecology is passing through a dual crisis of renaissance and specialization. As a result those works dealing with any one aspect of man's current ecologic dilemma are relatively recent formulations which have not yet entered the world of more formal publications.

The book section of the bibliography has been divided into two main parts; one covering the ecology crisis as an important social problem from the secular standpoint and the other dealing with the theology of ecology both in its development and more finished forms. From among the fifteen sources devoted to a discussion of the ecology crisis, Paul Anderson's Omega: Murder of the Ecosystem and Suicide of Man, Wayne H. Davis' Readings in Human Population Ecology, Noel Hinrichs' Population, Environment & People, William Murdoch's Environment, Resources, Pollution & Society, and Shepard and McKinley's Environmental, Essays on the Planet as a Home, stand out as excellent compilations.

At least six books are chiefly concerned with the theology of ecology; viz., Henlee H. Barnett's The Church and the Ecological Crisis, John B. Cobb's Is It Too Late? A Theology of Ecology, Paul Folsom's And Thou Shalt Die in a Polluted Land, An Approach to Christian Ecology, John W. Klotz' Ecology Crisis, God's Creation and Man's Pollution, C.F.D. Moule's Man and Nature in the New Testament, Some Reflections on Biblical Ecology, and Francis A. Schaeffer's Pollution and the Death of Man, The Christian View of Ecology. Books such as Reinhold Niebuhr's The Nature and Destiny of Man, Erich Sauer's The King of the Earth, The Nobility of Man According to the Bible and Science, Francis Schaeffer's Death in the City, and Genesis in Space and Time, and William Temple's Nature, Man and God, contain pieces to the puzzle of a theology of ecology which will one day emerge in a more

finished form. Their significant contribution is recognized more fully in chapter five, "Towards the Development of a Theology of Ecology."

## METHOD OF PROCEDURE

The inductive method of research was used almost exclusively in working out the details of this paper. The table of contents represents a synoptic view of the results of this research. Subpoints under each chapter typify the commonality of expression among the authors and their work which this writer investigated.

Dealing with the chapters consecutively in the order of their appearance, chapter one presents the subject, scope, and procedure of the paper. Chapter two introduces the ecological crisis as a substantial issue through its various ecological threats and environmental consequences. The third chapter embodies an analysis of the relevant periodical literature by means of a discussion of ecological ethics, ecological theology, and ecological bibliography. In this case, as a continuation of the inductive motif, the periodicals appear in the text of the paper before the books. The periodical literature deals with the subject matter in piecemeal fashion, while the pertinent books approach the theology of ecology in its totality. Chapter four encompasses the more developed ecological theologies; the cause of the ecology crisis, ecological ethics, theology of nature, and theology of ecology form the cornerstones of the ensuing discussion. The fifth chapter reflects those areas for future study which can ultimately be a part of the development of a theology of ecology. Finally, chapter six summarizes the discoveries of the research paper in the form of an abstract.

## Chapter 2

### ECOLOGY CRISIS

The decade of the seventies, we are told, will be known as the Age of Ecology. Under this banner liberals and conservatives, farmers and suburbanites, scientists and theologians have fallen into step. Although the problems of population growth, exhaustion of natural resources, and pollution have been around for some time, the American public, it seems, is now beginning to sense the severity of the crisis, and we can therefore look forward to concerted action in the years ahead.

The basic principle of ecology that everything is interrelated has made it virtually impossible to know all the ways in which human activities may alter the environment so as to threaten health, genetic inheritance, or ecological balance. The list is potentially a very long one, but present knowledge does not allow even the experts to speak confidently in many areas.

This chapter has been developed to deal primarily with the ecology crisis as a scientific and social dilemma which poses a real threat to continued human existence. Firstly, from the perspective of causation, man's effect on the global environment has apparently manifested itself in the form of at least four principal ecological threats: Population explosion, radioactivity, pesticides, and fertilizers. Secondly, the input of these ecological threats has had a disastrous effect upon the receiving media. The four environmental consequences to be dealt with are: Water pollution, air pollution, thermal pollution, and noise pollution.

### ECOLOGICAL THREATS

One of the major difficulties in the assessment of the effects of

the various ecological threats upon the environment has been the problem of measurement. For example, with respect to the exploding population, scientists are able to mathematically project future population levels based upon current census data, but the actual effects of population density upon the multiplicity of interrelationships within the ecosystem may not be fully realized until such time as an overpopulated environment actually exists. However, from what the social scientists are telling us about the exploding populations of such countries as India and China, mankind can no longer leisurely wait for a potential problem to reach epidemic proportions before he does something about it. In addition, man's rapidly expanding technology has forced him to begin to anticipate the effects of the various ecological threats, rather than deal with them ex post facto.

### Population Explosion

Dr. Paul R. Ehrlich Professor of Biology at Stanford University whose specialty is population biology was the first writer to enunciate the horror and devastation of an exploding population to the general public in his book, The Population Bomb. Professor Ehrlich's cogent analysis of the problem is observed in the following statement:

It has been estimated that the human population of 8000 B.C. was about five million people, taking perhaps one million years to get there from two and a half million. The population did not reach 500 million until almost 10,000 years later - about 1650 A.D. This means it doubled roughly once every thousand years or so. It reached a billion people around 1850, doubling in some 200 years. It took only 80 years or so for the next doubling, as the population reached two billion around 1930. We have not completed the next doubling to four billion yet, but we now have well over three and half billion people. The doubling time at present seems to be about 35 years. Quite a reduction in doubling times: 1,000,000 years, 1,000 years, 200 years, 80 years, 35 years. Perhaps the meaning of a doubling time of around 35 years is best brought home by a theoretical exercise. Let's examine what might happen on the absurd assumption that the population continued to double every 35 years into the indefinite future.

If growth continued at that rate for about 900 years, there would

be some 60,000,000,000,000,000 people on the face of the earth. Sixty million billion people. This is about 100 persons for each square yard of the Earth's surface, land and sea.<sup>1</sup>

As the birth rate in a population exceeds the death rate, not only is an exploding population produced, but also as a result from an increase in sheer numbers, a tremendous strain is placed upon an environment's food supply. Consequently, the inhabitants of such an eco-system fall prey to starvation and disease. As the effort is put forth to save the people from complete annihilation, the land becomes ravaged and is no longer able to support its ever-increasing resident population. This horrendous cycle; i.e., from population explosion, to starvation, to environmental exploitation, though somewhat artificially expressed in the foregoing sentences, nevertheless, has already come to pass in many parts of the world.<sup>2</sup>

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<sup>1</sup>Paul R. Ehrlich, The Population Bomb (New York: Ballantine Books, Inc., 1968), p. 4.

<sup>2</sup>This brief analysis of the population explosion has been given further treatment and documentation by the following researchers: Walter E. Howard, "The Population Crisis Is Here Now," Readings in Human Population Ecology, ed. Wayne H. Davis (Englewood Cliffs: Prentice-Hall, Inc., 1971), pp. 7-12; Paul R. Ehrlich, "Too Many People," The Environmental Handbook, ed. Garrett DeBell (New York: Ballantine Books, Inc., 1970), pp. 219-232; Paul Ehrlich, "The Population Crisis: Where We Stand," Population, Environment & People, ed. Noel Hinrichs (New York: McGraw-Hill Book Company, 1971), pp. 8-16; Lawrence Lader, Breeding Ourselves to Death (New York: Ballantine Books, 1971), pp. 1-84; Nathan Keyfitz, "The Numbers and Distribution of Mankind," Environment, Resources, Pollution & Society, ed. William W. Murdoch (Stamford: Sinauer Associates Inc., 1971), pp. 31-52; Vance Packard, "Progress Through Proliferation of People," The Waste Makers (New York: Pocket Books, 1960), pp. 148-156; Paul R. Ehrlich and John P. Holdren, "Population and Panaceas, a Technological Perspective," Environmental Essays on the Planet as a Home, eds. Paul Shepard, and Daniel McKinley (Boston: Houghton Mifflin Company, 1971), pp. 252-269; The Commission on Population Growth and the American Future, "Population and the American Future" (New York: The New American Library, Inc., 1972), pp. 9-21.



## Radioactivity

As a general environmental threat, radioactivity is a creation of the past quarter century. Prior to the bomb only tiny amounts of radioactive materials were in the hands of men, and few but scientific workers were conscious of any hazards. All that has changed. We are compelled to consider radioactivity, how it is generated, how it moves in the environment, its effects on man, and the magnitude of the problem of contamination over the coming years.

In discussing biological damage from ionizing radiation, somatic damage and genetic damage must be differentiated. Regarding somatic damage, "the radiation injury takes many forms, ranging from small and long-delayed effects to short-term lethal effects. In the individual, the biologic damage ranges from reduced life expectancy through cancer and leukemia to death."<sup>3</sup>

While in the process of commenting on the genetic effects of ionizing radiation, Dr. Earl Cook, Professor of Geology and Geography at Texas A & M University, wrote:

A subtle and serious consequence of some radiation injuries is genetic transmission of physiological defects following an increase in mutation rates. Thus the species may suffer genetic damage from inherited defects. A mutation is a chemical or physical accident that changes the composition of a gene. Mutations induced by radiation are no different from spontaneous ones. In deed, geneticists believe that 5-12 percent<sup>4</sup> of the "spontaneous" mutations are caused by background radiation.

No absolutely safe level of ionizing radiation has been determined by the scientific community or any other discipline. Any man-made

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<sup>3</sup>Earl Cook, "Ionizing Radiation," Environment, Resources, Pollution & Society, ed. William Murdoch (Stamford: Sinauer Associates Inc., 1971), p. 256.

<sup>4</sup>Ibid., p. 257.

addition to the natural level has only increased the potential for biological harm. Consequently, the use of radiation and nuclear energy materials that release radioactivity into the environment have necessarily involved a balancing of benefits and risks. Society's concern for the effect on man reflects the fact that it values individual human life.

### Pesticides

Pesticides are one of the technical inputs central to high-productivity agriculture. Dating at least from the publication of Rachel Carson's Silent Spring there has been a growing sense of disquietude about the environmental consequences of using pesticides. In referring to the endless cycle of pesticide development and its inability to get the job done, Rachel Carson wrote:

The whole process of spraying seems caught up in an endless spiral. Since DDT was released for civilian use, a process of escalation has been going on in which ever more toxic materials must be found. This has happened because insects, in a triumphant vindication of Darwin's principle of the survival of the fittest, have evolved super races immune to the particular insecticide used, hence a deadlier one has always to be developed--and then a deadlier one than that. It has happened also because . . . destructive insects often undergo a "flareback," or resurgence, after spraying, in numbers greater than before. Thus the chemical war is never won, and all life is caught in its violent crossfire.<sup>5</sup>

The term "pesticides," generically, has been used to refer to all kinds of chemicals which kill organisms inimical to human purposes. But, as is so often the case with humanly devised solutions, the unintended also occurs. As a result, many of the deadly chemical compounds currently being used to contain "undesirable" plant, insect, and animal populations are accumulative over a long period of time and may have

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<sup>5</sup> Rachel Carson, Silent Spring (Greenwich: Fawcett Publications, inc., 1962), p. 18.

damaging repercussions for human life. "Responsible public health officials," according to Rachel Carson, "have pointed out that the biological effects of chemicals are cumulative over long periods of time, and that the hazard to the individual may depend on the sum of the exposures received throughout his lifetime."<sup>6</sup>

A great deal of credit must go to Rachel Carson for having alerted the public to a difficult and critical problem. She uncovered and pointed out publicly for the first time, even to many scientists, the facts which link modern contaminants to all parts of the environment including man. There are no separate environmental problems, Rachel Carson insisted.<sup>7</sup>

### Fertilizers

There are noticeable gaps in present knowledge concerning the precise effects of soil nutrients upon environmental balance. However, there is good reason for such inadequate knowledge. In the past, interest was lodged exclusively in the relation of nutrient input to plant growth; in other

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<sup>6</sup> Ibid., p. 169.

<sup>7</sup> Many of the critical observations and speculative statements that Rachel Carson made over twelve years ago concerning the damaging effects of chemical pesticides upon the environment are now being substantiated through current scientific research. The corroboration of this fact has been noted in the following literature: Clarence Cottam, "Pesticide Pollution," Omega: Murder of the Ecosystem and Suicide of Man, ed. Paul K. Anderson (Dubuque: Wm. C. Brown Company Publishers, 1971), pp. 134-141; Sterling Brubaker, "Pesticides," To Live on Earth, Man and His Environment in Perspective (New York: The New American Library, Inc., 1972), pp. 108-119; Steven H. Wodka, "Pesticides Since Silent Spring," The Environmental Handbook, ed. Garrett DeBell (New York: Ballantine Books, Inc., 1970), pp. 76-91; Frank Graham, Jr., Since Silent Spring (Greenwich: Fawcett Publications, Inc., 1970), pp. 1-288; Robert L. Rudd, "Pesticides," Environment, Resources, Pollution & Society, ed. William W. Murdoch (Stamford: Sinauer Associates Inc., 1971), pp. 279-301.

words, agriculturalists were interested in knowing what rate of fertilizer would increase the profit margin? Efforts were concentrated on having farmers use more, not less, fertilizer, and on convincing them that there was ample room for increased application. Today, however, such interest has led to a totally different inquiry; i.e., given a specified input of nutrient, where does it go?

In commenting on the probable effects of fertilizers upon the environment, Sterling Brubaker stated:

Despite its primary effect of favoring plant growth, fertilizer use has occasioned much concern as a possible threat to the environment. Attention has centered in particular on the role of nitrogen and phosphate fertilizers in contributing to an excess of plant nutrients in water (eutrophication). Other more calamitous warnings have concerned nitrate poisoning of infants (methemoglobinemia) from excessive concentrations in water and the fear that heavy use of nitrogen fertilizer adversely affects the porosity and tilth of the soil bacteria needed to fix nitrogen or to convert organic matter into the form of nitrogen required by growing plants.<sup>8</sup>

## ENVIRONMENTAL CONSEQUENCES

In the preceding section, "Ecological Threats," the discussion dealt primarily with some of the gravest threats to environmental quality; viz., the population explosion, radioactivity, pesticides, and fertilizers. These factors, for the most part, have been functioning as environmental input. Potential dangers have been cited but so far their full affect upon the environment has not been realized.

The following presentation will attempt to show those areas in which serious ecological damage has already taken place. The general quality of our environment has been affected by the careless input of

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<sup>8</sup> Sterling Brubaker, To Live on Earth, Man and His Environment in Perspective (New York: The New American Library, Inc., 1972), p. 119.

various ecological burdens; consequently, pollution has been surfacing in various forms on a rather wide scale.

### Water Pollution

W.T. Edmondson, Professor of Zoology at the University of Washington, has centered his research on the mechanisms that control the productivity and the populations of lakes, particularly Lake Washington. Dr. Edmondson has found that sewage, agricultural drainage, erosion, radioactive isotopes, toxic wastes, and thermal pollution are among the chief pollutive agents which if they appear in excessive quantities lead to the total destruction of fresh water bodies.<sup>9</sup> Referring to the water's inability to absorb large amounts of waste, Professor Edmondson stated:

Rivers and lakes may be "enriched" by surface runoff carrying everything that people put into their house drains, put onto their land, or dispose of on the streets: sewage, fertilizers, herbicides, insecticides, and general junk. Up to a point we have been able to get away with this because water and its biota have the capacity to absorb and break down by biological action many kinds of wastes. But some kinds of waste cannot be degraded, and any system can be overloaded. And the "somewhere else" turns out to be where somebody else is trying to live and use the water.<sup>10</sup>

Most water pollution is not necessarily permanent since, if man significantly reduces or stops the additions, natural forces will act to restore quality. The problem of maintaining water quality is permanent,

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<sup>9</sup> Professor Edmondson's analysis of fresh water pollution is essentially underscored by David Zwick's introductory chapter, "Water Wasteland," in his book Water Wasteland, Ralph Nader's Study Group Report on Water Pollution (New York: Bantam Books, Inc., 1971), pp. 3-34.

<sup>10</sup> W. T. Edmondson, "Fresh Water Pollution," Environment, Resources, Pollution & Society, ed. William W. Murdoch (Stamford: Sinauer Associates Inc., 1971), p. 213.

however, because man must continually manage the water resources that he uses to ensure against overloading.<sup>11</sup>

### Air Pollution

Clean air is essential for man's health. The average person breathes about 35 pounds of air each day. Man cannot go without air for more than six minutes without suffering some degree of brain damage. But our air is no longer clean. More than 3,000 foreign chemicals have been identified in the atmosphere; more than 140 million tons of pollutants are put into the air each year over the United States.<sup>12</sup>

The air-contaminating activities of civilization fall into three general categories: Attrition which is the wearing or grinding down by friction; vaporization, the change of substance from a liquid to a gaseous state; and the most notorious, combustion, the process of burning.<sup>13</sup> The by-products of the process of combustion are, perhaps, chiefly responsible for the alarming rise in respiratory disease seen during the past several years.<sup>14</sup> Chronic respiratory diseases such as bronchial asthma, chronic bronchitis, pulmonary emphysema, and lung cancer have been definitely linked to the increase in atmospheric pollutants.<sup>15</sup>

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<sup>11</sup> Brubaker, op. cit., p. 147.

<sup>12</sup> Paul and Anne Ehrlich, Population, Resources, Environment (San Francisco: Freeman, 1970), p. 119.

<sup>13</sup> National Air Conservation Commission, Air Pollution Primer (New York: National Tuberculosis and Respiratory Disease Association, 1969), pp. 19-29.

<sup>14</sup> Richard J. Hickey includes an excellent examination of a theory that air pollution can cause chronic health effects in his paper entitled, "Air Pollution," found in Environment, Resources, Pollution & Society, ed. William W. Murdoch (Stamford: Sinauer Associates Inc., 1971), pp. 189-212.

<sup>15</sup> National Air Conservation Commission, op. cit., pp. 55-76.

### Thermal Pollution

Still another area of pollution is that of thermal pollution. The expression "thermal pollution" has come to be accepted as a descriptive term for unwanted heat energy accumulating in any phase of the environment. Since the beginning of time, the earth has received most of its thermal energy in the form of solar radiation. This relationship between the earth and the sun has reflected the necessity of maintaining a workable balance between incoming and outgoing radiation. But, man, through ever increasing technology, has begun to upset this balance by injecting more thermal energy into the earth's environment and atmosphere than it can safely absorb or adequately reflect.<sup>16</sup>

In writing about the biological effects of thermal pollution, Dr. Cole reflected that, "The first and most obvious biological effect one thinks of is that bodies of water may become so hot that nothing can live in them."<sup>17</sup> As the earth's population increases and people demand more services, great care will have to be taken to see that the waste heat from industry and public utilities is being properly utilized and not indiscriminately dumped into the environment only to create a health hazard for both men and animals.

### Noise Pollution

A relatively new area of pollution is that of noise pollution. Three of the major offenders, particularly in and around large cities, are

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<sup>16</sup>LaMont C. Cole, "Thermal Pollution," Omega: Murder of the Ecosystem and Suicide of Man, ed. Paul K. Anderson (Dubuque: Wm. C. Brown Company Publishers, 1971), pp. 169-173.

<sup>17</sup>*Ibid.*, p. 174.

construction noise, motor vehicle noise, and aircraft noise.<sup>18</sup>

Noise is measured in terms of decibels, a unit of relative noise intensity. Silence represents zero decibels; ten decibels has the intensity of rustling leaves. At the other end of the spectrum is the sound of a jet plane at takeoff, which amounts to 150 decibels. Rock music throbbing through amplifiers is measured at 110 decibels. According to the American Medical Association, any noise registering over 85 decibels is harmful if the listener has prolonged exposure.<sup>19</sup>

### SUMMARY

The growing concern over environmental contamination has found man himself at the center of attention. For man is at once both the offender and the offended, the contaminator and the contaminated. Man's technological ingenuity enabled him first to compete with the awesome power of the natural world, then overcome it by refining his skills, and finally ravage it through careless consumption and shortsighted conservation. Now, mankind has begun to reap the consequences of his ill-gotten gains and the prospects are, indeed, frightening. The foregoing examination of a selected number of ecological threats and environmental consequences has revealed that man is on the brink of doing not only irreparable damage to himself and his environment, but also to his posterity. What is man to do? To whom can he turn?

At the present time, there is a dearth of secular literature dealing with the moral/ethical implications of man's environmental dilemma.

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<sup>18</sup>Donald F. Anthrop, "Environmental Noise Pollution: A New Threat to Sanity," Omega: Murder of the Ecosystem and Suicide of Man, ed. Paul K. Anderson (Dubuque: Wm. C. Brown Company Publishers, 1971), pp. 149-152.

<sup>19</sup>Brubaker, To Live on Earth, op. cit., pp. 158-159.



But, within the Christian community, signs of very serious ethical and theological thinking are becoming everywhere apparent. The following chapter is an attempt to analyze what significant religious periodical literature is currently saying concerning the ecology crisis.

### Chapter 3

#### PERIODICALS: THEOLOGY OF ECOLOGY

On Earth Day, April 22, 1970, concern for the environmental crisis reached its emotional peak in America. Across the nation, millions of people demonstrated their concern to save the good earth. After Earth Day, public interest in the ecological issue began to wane. One major reason for the general cooling toward the ecological issue is that Americans are discovering that a cleaner environment will be costly. The economic factor involved in cleaning up our natural environment is staggering. Moreover, the average American is becoming aware that he himself is a significant contributor to pollution. Yet he is reluctant to change his polluting practices for fear his life style will have to be significantly altered.

Though the issue of the ecology crisis has de-escalated as far as general public interest is concerned, ecology will continue to be a major problem for those involved in the study of human nature. Over the past several years the offerings in the field of religious periodical literature pertaining to the varied aspects of the ecology crisis have grown tremendously. Theologians and religious ethicists are beginning to think through the salient factors in the eco-crisis in the light of the biblical understanding of man and nature. It is becoming more and more apparent that man separated from God is man out of touch with himself, with others, and with nature. Religious thinkers are endeavoring to promote substantial healings in every area of man's existence where there are divisions because of the Fall.

The present chapter mirrors the attempt on the part of this writer to analyze the content of current, significant religious periodical

literature having to do with the crisis of ecology. In its development, some attention has been given to ecological ethics, theology, and bibliography.

## ECOLOGICAL ETHICS

Historically, ethicists have limited the scope of moral responsibility almost wholly to man and society. In the light of the ecological crisis, it is imperative that the zone of ethics be extended to man in his total environment. Ethics must be redefined to include man not only in relation to his neighbor and the social order, but in his relation to all creatures and things, the organic and the inorganic. This chapter will attempt to briefly set forth some basic elements of an ecological ethic which are surfacing in contemporary religious periodical literature.

### Attitudes and Values

The center of the problem in the environmental crisis appears to be one of values.<sup>1</sup> It is also apparent that there is no solution in presently

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<sup>1</sup>The earliest reference in the literature that this writer found concerning the centrality of values was expressed by Robert Anderson, minister of the University Congregational Church, Missoula, Montana. His presentation pointed to the importance of the questions of perception and values; noting what we perceive when we look upon the "things" of our environment and the essence of their meaning for us. "An Ecological Conscience for America," Social Action, XXIV (May, 1968), pp. 13-14. Richard Means underscored the significance of the search for values in his analysis of the contemporary religious conscience. "Ecology and the Contemporary Religious Conscience," The Christian Century, LXXXVI (December 3, 1969), 1547-1548. Carl H. Reidel, now Director of the Environmental Program at the University of Vermont, said in an interview that values are at the heart of the environmental problem. "Christianity and the Environmental Crisis," Christianity Today, XV (April 23, 1971), 4. Bruce Wrightsman favors the emergence of an ecological view or land ethic which will achieve a viable balance in nature by protecting it from the

prevailing views of man and his ethics either. In an editorial written for Christianity Today several years ago, the writer stated that:

Ever changing values are an extension of the philosophical thesis that there are no fixed principles or categories. Darwinian theory has invaded so many disciplines that process itself is sometimes regarded as the only ultimate reality. But in this there is no hope for earth. Only as men recognize universally valid principles will we have a basis for controlling pollution and restricting exploitation.<sup>2</sup>

Searching for a meaningful value ethic one is lead beyond a technical set of remedies which serve only to treat a succession of symptoms to the real causes of the ecological crisis. As Ian Barbour states, "Unless the disease is cured, it will simply break out in new forms as men find new ways to violate the web of life."<sup>3</sup> The eco-crisis emerges as a result of our attitudes toward nature, on the one hand, and our attitudes toward technology, on the other.

Toward nature. Attitudes toward nature in Western civilization have been influenced historically by the biblical doctrine of creation. Nature as created by God has been held to be essentially good rather than evil or illusory. But the creation story which also talks of man's dominion over the earth has been accused by some to be the basis for Western man's exploitative attitude toward nature.<sup>4</sup> In an effort to heal the

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reckless exploitation of particular interests. "Man: Manager or Manipulator of the Earth," Dialog, IX (Summer, 1970), 211.

<sup>2</sup>Editorial, "Terracide," Christianity Today, XV (April 23, 1971), 26-27.

<sup>3</sup>Ian G. Barbour, "An Ecological Ethic," The Christian Century, LXXXVII (October 7, 1970), 1180.

<sup>4</sup>Referring to Lynn White's accusation that the command given in Genesis 1:28, to subdue the earth and have dominion over its creatures is the source for the exploitive attitude of Western man, Bruce Wrightsman had this to say: "White's exegesis of these passages is questionable to me. Nowhere do I find the Bible providing justification for the

bifurcation that exists between man and nature, some have advocated that a recovery of man's harmony and unity with nature could be achieved through a study of the Eastern religions.<sup>5</sup> Speaking of the futility of such a return to primitivism, Douglas Elwood remarked:

. . . it can be shown that his world view does not necessarily yield a higher ethic of nature. Although there are in most traditional cultures some built-in limitations on man's use of natural resources--usually the fear of the consequences of displeasing the environmental

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"exploitation" of nature, unless by that term he means only its "use." That is, of course, the first meaning for the term given in Webster's dictionary. But it seems that it is the second meaning that White had in mind. "To make unethical or selfish use of for one's own advantage or profit," which is the accepted Marxist usage of the terms. Either way the connotations associated with the term are such as to make its employment unfortunate at best and wrong at worst. Genesis, therefore, seems to be the pretext, not the source for the exploitive attitude." "Man: Manager or Manipulator of the Earth," op. cit., p. 203.

<sup>5</sup> Richard Means, Associate Professor of Sociology at Kalamazoo College in Michigan, implied his support for a return to a pantheistic view of nature when he observed that: "Although the kind of "cool cat" aloofness expressed by this generation grates on the nerves of many of us, and more than a few "squares" find difficulty in "digging" the new hair styles (not to mention Twiggy), there may be a "sound instinct" involved in the fact that some of these so-called beats have turned to Zen Buddhism. It may represent an overdue perception of the fact that we need to appreciate more fully the religious and moral dimensions of the relation between nature and the human spirit." "Why Worry About Nature?" Saturday Review, L (December 2, 1967), 15.

Francis Schaeffer takes Means to task for holding up pantheism as a viable alternative for leading man out of his current ecological crisis. Of it, Schaeffer said: "It gives . . . no meaning to any particulars. In true pantheism, unity has meaning, but the particulars have no meaning, including the particular of man." Pantheism is a weak answer for the bifurcation that exists between man and nature, for in its approach to unity man becomes "no more than the grass." Pollution and the Death of Man, The Christian View of Ecology (Wheaton: Tyndale House Publishers, 1970), p. 30.

spirits--the fact is that premodern man is not any more concerned to preserve and care for his natural environment than is modern man.<sup>6</sup>

The more orthodox position seems to lie in the direction of thought that "the needed correctives can be found by recovering biblical themes which have been neglected."<sup>7</sup> This move could lead to the establishment of a theology of nature, to a Christian understanding of man's relationship with nature, and to a responsible involvement in the world.<sup>8</sup>

Toward technology. Technology has become the handmaid of science and has made it possible for man to solve many baffling problems. But now this product of man's inventiveness raises its Gargantuan form against its creator and Pogo's comic strip comment seems all too appropriate: "We have met the enemy and he is us." Ian Barbour maintains that our society "which is thing-oriented rather than person- or life-oriented" has involved us in "the frantic pursuit of comfort."<sup>9</sup> McCormick concurs that this "consumer mentality" has come about as

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<sup>6</sup> Douglas J. Elwood, "Primitivism or Technocracy: Must We Choose?" The Christian Century, LXXXVIII (December 1, 1971), 1413.

<sup>7</sup> Barbour, "An Ecological Ethic," loc. cit.

<sup>8</sup> James C. Livingston has formulated four "ecological axioms" which he feels are necessary for the making of an ecological ethic. They are: ". . . that man, despite his unique status, is as much a part of nature as rocks and trees and other animals. . . . that the natural world is an interdependent organism in process. . . . the concept of a balance or equilibrium in nature. . . . that nature is not maximally efficient." Caution must be exercised in reading Livingston's paper, however; because behind apparently agreeable statements lies the obvious influence of Teilhard de Chardin and Alfred North Whitehead's process philosophy. "The Ecological Challenge to Christian Ethics," The Christian Century, LXXXVIII (December 1, 1971), 1409-1411.

<sup>9</sup> Barbour, "An Ecological Ethic," op. cit., p. 1181.

the result of "our attempt to have too much for too many."<sup>10</sup> Professor John MacQuarrie adds this understanding comment and word of caution:

In all parts of the world, science and technology will--if no unforeseen calamities occur--continue to advance, and so will the industrialization and urbanization that accompany them. I do not think we would have it otherwise, and even if we did, I do not think we could reverse the process, for these things have acquired a certain momentum. But it becomes increasingly important to control the process, to set limits to the exploitation of nature, to become sensitive to those points at which, in damaging his environment, man is also damaging himself, not only physically but also mentally and spiritually. With technology as with so much else, we have still to learn the truth of that ancient piece of moral wisdom, . . . , nothing too much.<sup>11</sup>

### Implications and Responsibilities

The current mood of ethicists in the field of Christian social ethics is that man himself is responsible for the present ecological crisis. In addition the church is viewed as having a divine obligation to reveal the full meaning of man's duty in resolving the critical points of his environmental dilemma.

Concerning cultural myths. Dr. Richard Baer, Chairman of the Department of Religion at Earlham College, has urged the church to "demythologize those contemporary cultural idols and myths which prevent man from relating more intelligently to his natural environment."<sup>12</sup>

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<sup>10</sup> Richard A. McCormick, "Notes on Moral Theology: April - September, 1970," Theological Studies, LXXXII (March, 1971), 98.

<sup>11</sup> John MacQuarrie, "Creation and Environment," The Expository Times, LXXXIII (October, 1971), 8.

<sup>12</sup> Richard A. Baer, Jr., "Conservation: An Arena for the Church's Action," The Christian Century, LXXXVI (January 8, 1969), 41.

Baer mentions three modern myths<sup>13</sup> that stand in the way of the theological establishment's endeavor to effect social change. The theologian, Baer said, must become concerned with:

. . . America's dubious fascination with gross national product as a measure of national achievement. . . . The "need projections" put out by business and government and, occasionally, by foundations and universities. . . . Our distorted understanding of the relation between individual and community.<sup>14</sup>

Concerning ethical imperatives. In an age of environmental crisis, when for the first time a large proportion of our population has become aware of how badly we have treated our natural environment, the church is endeavoring to lead mankind out of this distressed situation through the establishment of meaningful ethical guidelines. Firstly, it has been suggested that "we must attempt to understand the basic ecological data relating to the environmental crisis."<sup>15</sup> Douglas Daetz observed that by means of this knowledge, ". . . we must keep reminding ourselves of the "no more business as usual" basis of our faith, and our actions must

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<sup>13</sup>Richard Means implies the presence of a fourth such myth which he has labeled as the "Promised Land" myth. This concept of America held by many Protestant Americans assumes "that nature is a bountiful, limitless preserve, created solely for the comfort and sustenance of man." "Man and Nature: The Theological Vacuum," The Christian Century, LXXXV (May 1, 1968), 580.

<sup>14</sup>Baer, "Conservation: An Arena for the Church's Action," pp. 41-42.

<sup>15</sup>Richard A. Baer, Jr., "Ecology, Religion, and the American Dream," The American Ecclesiastical Review, CLXV (September, 1971), 44.

Gilbert E. Doan agreed with Baer's emphasis upon understanding for he said, "The first step, then, on the path to an ecologically informed life style is literacy in the field." "Towards a Life Style Environmentally Informed," The Lutheran Quarterly, XXIII (November, 1971), 307.



accord with the urgency implied by such a basis."<sup>16</sup> Secondly, in view of our responsibility to understand the basic dimensions of the environmental problem, Baer advises that we must "bring to bear on this problem the resources of our Christian heritage and our deepest corporate and personal commitment to work for realistic solutions."<sup>17</sup> Thirdly, Dr. Baer concludes, ". . . that creation as understood in the biblical tradition involves interrelationship and wholeness, not incidentally, but fundamentally and necessarily."<sup>18</sup>

Concerning ethical pitfalls. There are at least three potential pitfalls which we must avoid at all costs as we grapple with the environmental crisis. "The first of these is the danger of adopting some kind of

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<sup>16</sup>Douglas Daetz, "No More Business as Usual," Dialog, IX (Summer, 1970), 172.

<sup>17</sup>Baer, "Ecology, Religion, and the American Dream," p. 45.  
In sermonic style, Howard Miller personified Baer's reference to "our Christian heritage" as man the earth keeper. Man the earth keeper has many responsibilities. Concerning man's duties, Miller declared: "He is responsible for himself. . . . Man the earth keeper is responsible for his family. . . . Man the earth keeper is responsible for his community. . . . Man the earth keeper is responsible for the entire world." "Man: Created to Be an Earth Keeper," Brethren Life and Thought, XV (Spring, 1970), 76-77.

<sup>18</sup>Baer, "Ecology, Religion, and the American Dream," p. 49.  
Donald Williams evidenced a holistic attitude towards man in his relation to nature in the form of three systematic statements. He said: "First, it must be recognized that separate solutions to portions of our environmental ills can only lead us to a worsening condition. . . . A second direction that we must take into our consciousness is ecology. Everything on this planet is tied together in a system of mutual interdependence. A third direction for the future is the positive use of public expenditures." "Our Environment: A Challenge to Reason," Church and Society, LX (January-February, 1970), 24-26.

simplistic "villain" theory to explain the mess we are in."<sup>19</sup> In other words, it becomes a fruitless and even counter-productive exercise to spend time pointing the finger at such "culprits" as General Motors, or Standard Oil of New Jersey, when the attention should be directed inward to personal ethical concerns. "The second danger is that ecology could become a kind of white, middleclass, suburban cop-out from other important social and economic concerns."<sup>20</sup> The third pitfall which we must try to avoid is ". . . the danger of focusing too exclusively on what is wrong with our environment--on the ugliness, the deterioration, the pollution--and not spending enough time reflecting positively on what a quality environment might look like."<sup>21</sup>

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<sup>19</sup> Baer, "Ecology, Religion, and the American Dream," p. 56.

James M. Houston, Principal of Regent College in Vancouver, British Columbia, appears to be in accord with Baer at this point. With respect to man's inherent desire to look for simple answers to complex problems, Houston warns the reader, "Beware of panaceas and fads." The author also includes four additional causes of confusion that Christians should be warned against in their search for environmental solutions. Cautioning, he says, "Beware of false emphases. . . . false judgment. . . . false analogies. . . . false solutions." "The Environmental Movement--Five Causes of Confusion," Christianity Today, XVI (September 15, 1972), 8-10.

<sup>20</sup> Baer, "Ecology, Religion, and the American Dream," p. 57.

In reference to Theodore Rosak's book, The Making of a Counter Culture, Baer contends that the "objective consciousness" alienates us from what is known. He goes on to say that, "The knower usually feels superior to what he is studying, he remains aloof and analytical, he does not permit his own being to be questioned by the object of knowledge. Such considerations as beauty, joy, goodness, and love cannot be permitted to distract the knower from his appointed task." In other words, the absence of any purely aesthetic or subjective considerations in working out the details of environmental management could have a telling effect upon man. A workable balance between the objective and subjective will be needed. "Environmental Turnabout," 1972. (Mimeographed.)

<sup>21</sup> Baer, "Ecology, Religion, and the American Dream," p. 58.

Concerning future obligations. Daniel Callahan who is Director of the Institute of Society, Ethics and the Life Sciences in Hastings, New York, has spent some time investigating the nature of our obligations to future generations. Referring to man's ecological responsibilities, Callahan stated:

If the ecologists are correct, what we are now doing to our natural resources and our environment may well be irreparably harmful. It is not just that we may be ruining things for ourselves; we may be ruining things for all of those who follow us. The animals we poison into extinction will not exist in the future; that is what extinction means. The lands we ruin will not bear fruit for our heirs. The lakes we pollute will not be available for our children, or for theirs. To take another type of example, the cities we plan now will be lived in by future generations; the technologies we devise will condition the ways and meaning of life of those who proceed from us.<sup>22</sup>

Searching for some ethical norms which would be appropriate for the behavior of the present generation with respect to the lives of future generations, Dr. Callahan has suggested some summary rules concerning such obligations. So stated they are:

- a) Do nothing which could jeopardize the very existence of future generations.
- b) Do nothing which could jeopardize the possibility of future

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<sup>22</sup>Daniel Callahan, "What Obligations Do We Have to Future Generations?" The American Ecclesiastical Review, CLXIV (April, 1971), 267-268.

Charles West refers to three philosophical systems which have been vying for man's attention with respect to his future obligations. Firstly, the proponents of "evolutionary humanism" contend that man as the center of the universe will continue to develop his technological reason and thereby rebuild and remold his environment. Secondly, advocates of "revolutionary humanism" seek self-assertion not through planning but revolt. Their strategy calls for tearing down existing structures in order to establish an environment where "self-determination" is a reality. Thirdly, West reflected upon Christianity in which man is responsible not to nature but to God for the rest of God's creation. "Theological Guidelines for the Future," Theology Today, XXVII (October, 1970), 278-286.

generations exercising those fundamental rights necessary for a life of human dignity.

c) If it seems necessary, in the interests of the existing rights of the living, to behave in ways which could jeopardize the equivalent rights of those yet to be born, do so in that way which would as far as possible minimize the jeopardy.

d) When trying to determine whether present behavior will in fact jeopardize future life, calculate in as responsible and sensitive a manner as one would in trying to determine whether an act with uncertain consequences would be harmful to one's own children.<sup>23</sup>

Concerning politics. Those who support political action as the key to environmental redevelopment have cited the gross inefficiency of any other process to obtain lasting results. Since the majority of the high volume pollution offenders are large industries or corporations, defenders of this position have turned to "a new kind of political organization--one that does not go into hibernation after every election."<sup>24</sup>

Referring to the mode and thrust of the emerging eco-political activist, Denis Hayes stated:

In company after company, people are using meetings of stockholders to force corporate executives to make decisions that protect the public interest. The few proxy fights that have been organized so far are just the beginning. Industrial decisions have as much effect on us as governmental ones. Some of them may be killing us. Why should not citizens have the power to stop that? The new government will be seeking a way. Polluting companies might be declared in ecological bankruptcy and turned over to trustees to administer them in the public interest. A couple of years ago that idea would have seemed outlandish. In the face of what we now know about the destruction of our environment and the future of the planet, it seems more like common sense.<sup>25</sup>

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<sup>23</sup> Callahan, *Ibid.*, p. 279.

<sup>24</sup> Denis Hayes, "Environmental Action," Theology Today, XXVII (October, 1970), 262.

<sup>25</sup> *Ibid.*

Concerning proposed solutions. In a sermon given at Peace Lutheran Church, Wayland, Massachusetts, Dr. Carl H. Reidel delivered a convincing analysis of three mutually exclusive alternatives available for one seeking to live in harmony with nature. Firstly, he proposed the scientific alternative. "This is the belief that if we can understand nature completely we will know the secret of living in harmony with her."<sup>26</sup> Secondly, in the course of his sermon, Dr. Reidel presented the "back-to-nature" alternative. "If we can somehow return to a state of nature, so this ideas suggests, we will gain harmony with nature."<sup>27</sup> Thirdly, Professor Reidel offered what he called "a personal alternative." "It is a simple alternative available to all, young or old, scientist or laborer. The alternative I offer you on this May morning in Spring is Jesus Christ--the Man and His Way."<sup>28</sup> The scientific and "back-to-nature" alternatives deny man's distinctive place in the world; they rob him of his humanity and ask him to be less than man. Explicating further the nature of the Christian environmental alternative, Reidel said:

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<sup>26</sup> Carl H. Reidel, "To Celebrate Spring," (Wayland, Massachusetts: Peace Luthern Church, May 6, 1972), p. 3. (Mimeographed.)

<sup>27</sup> Ibid., p. 4.

<sup>28</sup> Ibid., p. 5.

Ralph L. Moellering underscored the validity of the "personal alternative," as Carl Reidel called it, when he said in a sermon: "Apart from a firm commitment to God in Christ, expressed in love and concern for people and a wholesome environment, life can become empty and drab. If personal sacrifice is necessary to reclaim the earth, if we are compelled to give up luxuries and conveniences to which we have become accustomed, we can find our inspiration in the sign of the cross. In keeping with the paradoxical teaching of Jesus, we may lose our life through self-indulgence, while we may save our life through self-denial." "The Environmental Crisis and Christian Responsibility," Concordia Theological Monthly, XLII (March, 1971), 181.

Adoption of the Christian alternative to the environmental crisis requires a personal act of commitment to the person of Jesus Christ. And that means the total commitment of yourself, your possessions, your will and intellect. It is an act of totality. If you haven't experienced this kind of Christian conversion, go back to the New Testament. Set aside the doctrines, the religious formalities, and seek the Man Jesus; the Christ.<sup>29</sup>

## ECOLOGICAL THEOLOGY

For many years most theologians have neglected to address themselves to a theology for the environment, particularly inorganic reality. Now that the scientists and the secular media have made the details of the ecological crisis familiar to all, a number of theologians have begun trying to relate theology meaningfully to the problem. The following treatment has revealed an effort on the part of this writer to accurately assess the influence of at least a portion of the available religious periodical literature upon the developing eco-theology.

### Man's Relationship with Nature

Man's relationship with nature has come to be viewed from two different perspectives; i.e., anthropologically and Biblically. From the anthropological field of view, man is revealed as one committed to the natural order because of his special place in the finite world. Biblically, through the Old and New Testaments, it has been disclosed to man that he is not only an integral part of the natural order but that he is also over nature, responsible for its care and keeping.

Anthropologically. Commitment which has long been a central concept in all religious experience has now become a key factor in determining man's relationship to the total environment. Referring to this

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<sup>29</sup>Reidel, Ibid., p. 8.

"new commitment," Robert Anderson stated:

Rather than regarding so-called "subhuman" life and the things of existence as simply grist for the human mill, we must see them in a new light. Not only is their destiny tied up with ours, but now it becomes increasingly clear that our destiny is linked to theirs. What damages life in any form tends to damage us; what makes any part of existence ugly puts its blight on our soul and spirit, too. Thus, a new commitment to the redemption of land and forests, air and water, other creatures, even buildings and things, becomes a part of the means for our own human redemption.<sup>30</sup>

The second principle which must be taken into account, anthropologically, Anderson said, "is to take seriously the fact that we have been placed in a finite world."<sup>31</sup> Further clarifying the confines of this position, he remarked:

Even as our own lives come to an end, so everything else in creation has its own kind of limitation. The things of the natural order can be used up and exhausted if they are misused and carelessly exploited. Should population growth continue unchecked, the very space of earth upon which men must live and grow their crops will be in drastically short supply. And just as there are limits to space and to life, so there are limits to minerals, forests, water, good soils, even air. Indeed, all natural resources can be depleted and devoured.<sup>32</sup>

Biblically. More conventional, popular eisegesis has lead some people to say that the message of Genesis 1:28, "Fill the earth, and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth," has provided man with a charter for exploiting nature. Convinced that the biblical concept of "man over nature" must not be lost nor misunderstood as a pretext for the indiscriminate use of nature, Walter Grueggemann has developed an interesting and revealing study of what "dominion" in this

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<sup>30</sup> Anderson, "An Ecological Conscience for America," p. 16.

<sup>31</sup> Ibid.      <sup>32</sup> Ibid.

particular Biblical context really means. Brueggeman's four point development appeared as follows:

1. To "subdue" is a royal activity, something kings and masters do (II Sam. 8:11, II Chr. 28:10, Jer. 34:11, 16, Zech. 9:15). The exiled people of Israel is promised a man, a "messiah," whose presence in the world will be kingly.

2. In texts perhaps dating back to the Exile, "subdue" is a term for the gift of the land from the Lord (Numb. 32:22, 29, Josh. 18:1, I Chr. 22:18). Thus "subduing" the land is accepting the promise God has made to his landless vassals. In this context "subdue" cannot legitimately be separated from "promise."

3. "To have dominion" is a promise of radical inversion; i.e., the oppression will end and those who are now oppressed will be in control (Lev. 26:17, Is. 14:2, 6, Ezek. 29:15, Neh. 9:28). Thus this is a word of jubilant expectation. In the man-nature context it means that oppression by nature (as in Canaanite and Babylonian religion) will be ended and man will come into royal freedom and responsibility.

4. "To have dominion" clearly means maintenance of order; i.e., control of the forces which injure and threaten. Thus Solomon "had dominion," his people had "peace on all sides" and "dwelt in safety. . . every man under his fig tree" (I Kings 4:24 f.). Several passages indicate that "having dominion" does not authorize tyranny and exploitation. Leviticus 24:43, 46, 53 warns the slave owner not to rule with harshness, and Ezekiel 34:4 states the antithesis of harshness: "Strengthen the weak, heal the sick, bind up the crippled. Bring back the strayed, seek the lost." And Psalm 72--a song no doubt familiar to the formulators of Genesis 1--describes the royal office as "having dominion," "defending the poor and giving deliverance to the needy" (verses 8, 4).

These pieces of evidence suggest that "to subdue and have dominion" is not at all a charter for abuse, but rather a command to order, maintain, protect and care for--i.e., to exercise control in the best interests of--the subject, in our case, "nature." Thus Genesis 1:28 emancipates man and sets him over nature and makes him responsible for "nature" entrusted to him. Nothing in this text supports the contention that it authorizes the kind of action which has issued in our current ecological crisis.<sup>33</sup>

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<sup>33</sup>Walter Brueggemann, "King in the Kingdom of Things," The Christian Century, LXXXVI (September 10, 1969), 1166.

A spirit of general accord apparently existed among the writers



Regarding the influence of the teachings of the New Testament upon an emerging eco-theology, L. Harold Dewolf, Dean of Wesley Theology Seminary, referred to the contribution of Johannine cosmology.

The Fourth Gospel, he said:

. . . declares that the same divine Logos made flesh in Jesus had participated in the creation of everything God created. The writer thus testifies to the complete unity of divine purpose in creating the cosmos and in redeeming men through Christ.

The New Testament, like the Old, teaches that the whole cosmos suffers with man under judgment and will share with him also the freedom and glory of redemption. Thus Paul writes:

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who dealt with the implications of the Biblical concept of "dominion." This agreement was evidenced in the following statements: "Genesis 1:26 ff. implies that nature is neither to be worshiped nor ravaged. Creation in the image of God points to man's position as an intermediary between God and nature. As the bearer of God's image, man is God's representative in the world. He is to subdue nature, to exercise dominion over it. He is permitted to use nature to fulfill his own life, but in so doing he does not exhaust his relation to nature. He is also to respect and care for it--even, one might say, as a guest respects the house of his host." Richard A. Baer, Jr., "Land Misuse: A Theological Concern," The Christian Century, LXXXIII (October 12, 1966), 1240.

"To be given dominion was not the grant of a franchise to exploit, but a commissioning to stewardship, trusteeship, servanthood. "And the Lord God took the man and put him into the garden of Eden to dress it and to keep it" (Gen. 2:15). Again, this was not a call to exploit, to rob, to despoil, but a call to serve the garden respectfully and lovingly." Robert Kreider, "Pollution: A Spiritual Crisis," The Mennonite, (April 21, 1970), 275.

"Genesis 1:26-28 enjoins man to have dominion over the earth and its creatures. With that expression, the biblical writer is saying that man is called to play the role of king over the rest of creation. But since the biblical model of kingship stresses the dimension of responsible care for that over which dominion is exercised (Ps. 72) and specifically rejects the notion of the king as rapacious despot (Ezek. 34), this means that man is charged to care for the fish, the birds, the cattle, even the earth itself. Far from advocating or even allowing an attitude of exploitation or a "bulldozer mentality," the Genesis injunction is a call for the care of the earth." James Limburg, "What Does It Mean to 'Have Dominion Over the Earth'?" Dialog, X (Summer, 1971), 223.

For the creation waits with eager longing for the revealing of the sons of God; for the creation was subjected to futility, not of its own will but by the will of him who subjected it in hope; because the creation itself will be set free from its bondage to decay and obtain the glorious liberty of the children of God. We know that the whole creation has been groaning in travail together until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly as we wait for adoption as sons, the redemption of our bodies (Romans 8, 19-23).<sup>34</sup>

### Man's Expression of His Ecological Relationships

Awakened by the pronouncements of ecology, the church has begun to stir in its effort to proclaim a relevant message to this present age. Excited by the advancements of recent scientific ecology, some Christians are beginning to contemplate the theological implications of these developments; others are searching for ways the church can have a part in healing and restoring man's broken relationship with nature; while some few concerned spokesmen are looking to the concept of environmental stewardship as a way of explaining the role of the Christian in caring for his environment.

Theological implications of recent scientific ecology. Professor Dewolf has isolated three specific areas of theology in which the implications of recent scientific ecology have had a decided impact. Firstly, Dewolf found that, "There comes from ecology a new understanding of the

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<sup>34</sup> L. Harold Dewolf, "Theology and Ecology," The American Ecclesiastical Review, CLXIV (March, 1971), 161.

The following writers have given evidence that they agree with Dewolf's assessment that creation and redemption in the New Testament are, indeed, inextricably bound together: John G. Gibbs, "Pauline Cosmic Christology and Ecological Crisis," Journal of Biblical Literature, XC (December, 1971), 466-475. Richard Leliaert, "All Things Are Yours . . .," The Homiletic and Pastoral Review, LXX (May, 1970), 574-575.

biblical doctrine that nature shares with man in suffering from God's judgment on human sin and shares also in human redemption."<sup>35</sup>

Secondly, the author mentioned that ecology has acted as an impetus to broaden our understanding of the Incarnation. Speaking of this new understanding, Dr. Dewolf stated:

When Christ lived in human flesh, he also lived in the flesh of all living creatures. By his flesh he was both like them and participating with them in the web of life. The Incarnation sanctified not only human life but all of earthly life--even of all earthly being, for the inorganic things, from oxygen to soil and water, are part of this great system of interdependency.<sup>36</sup>

Thirdly, he pointed to a new understanding of the communion supper. As symbols of our unity with Christ, the bread and the wine, Dewolf contended, "represent all the humbler creatures of earth without which our earthly life could not be sustained, but which also in many complex ways depend upon our responsible cultivation and protection."<sup>37</sup>

Myron Teske, Lutheran Campus Pastor at Purdue University, suggested in his review that the most exciting implication of recent scientific ecology is, "that both theologians and scientists are seeking to recycle their respective symbols to enhance their mutual dialogue."<sup>38</sup> Teske has sensed that the dialogue between theologians and the diverse technological forces of man will become increasingly important and necessary if man is to gain a proper understanding of himself within the multiplicity of his ecological relationships. Sketching out briefly the necessity for the dialogical confrontation between Christianity and technology, Teske quoted William Kuhns as saying:

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<sup>35</sup> Dewolf, *Ibid.*, p. 168.

<sup>36</sup> *Ibid.*, p. 169.      <sup>37</sup> *Ibid.*

<sup>38</sup> Myron Teske, "On Recycling Symbols in Dialogue Between Theologians and Scientists," The Lutheran Quarterly, XXIII (November, 1971), 317.

Man . . . does not live either by bread or by the Word of God alone, but also by the airplanes, telephones, automatic dishwashers, and television sets that surround and support him. Environments need, as never before, to be understood; not only in the ways they affect our daily patterns of work and play, but the deeper patterns of perceptual orientation, psychological need, and capacities for freedom, thought, and imagination. The confrontation between Christianity and the technological interface is therefore imperative, yet difficult. . . .<sup>39</sup>

The role of the church. Most writers in the field of religious periodical literature given to the task of interpreting man's environmental crisis theologically would agree that the church has a most significant potential role to play in conservation--a role as yet largely unrealized. Speaking of the possibility of ecclesiastical influence upon the development of meaningful environmentalism, Richard Baer observed:

Basic to the Judeo-Christian tradition is a persistent concern for social justice and man's welfare in this world, a resolute refusal to engage in mystical flight from concrete historical responsibility for one's neighbor. If the church today is to take seriously this rich heritage of concern, it cannot avoid grappling with the problem of the quality of man's natural environment.<sup>40</sup>

Dr. Baer has maintained that the church could play a significant role in resolving the environmental issue "by challenging society to re-examine its values. Just as ancient Israel demythologized nature and thus helped pave the way for the development of modern science, so the church today needs to dethrone such contemporary gods as the erroneous

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<sup>39</sup>Myron Teske, "On Recycling Symbols," p. 324, citing William Kuhns, Environmental Man (New York: Harper & Row, Publishers, 1969), p. 127.

<sup>40</sup>Richard A. Baer, Jr., "Conservation Problems More Human Than Technological," Catalyst, II (Fall, 1967), 4.

belief that progress can be measured only in terms of Gross National Product."<sup>41</sup>

Dr. John B. Cobb, Jr., Ingraham Professor of Theology at the School of Theology at Claremont, California, has called upon the church to establish what he has labelled as a "new asceticism." Cobb observed:

. . . having just begun to adjust officially to the widely practiced ethic of abundance, the church must now drastically reverse itself. We need a new ethic of scarcity, a new self-discipline, a new asceticism. . . . We must learn to view soil, water, and plant and animal life, as well as minerals and fossil fuels, not as everlasting givens but as the precarious endowment of a unique planet whose husbanding and cautious use are a primary responsibility of each generation. We must measure each habit and each decision about private consumption and social policy in ecological rather than economic terms. The resultant asceticism will be different from that of the past, but it will not be less ascetic. It will encourage those enjoyments, physical and spiritual, that do not use up our resources or pollute the environment--personal creativity, the arts, sports, education, psychological growth, sensual pleasure, celebration--while rejecting those that do--fine homes, private automobiles, jet planes, disposable containers, unnecessary food and clothing. The consequent economic hardships will be voluntarily accepted only in the context of a transformed vision of life and its meaning--that is, of an effective faith.<sup>42</sup>

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<sup>41</sup> Ibid., p. 5.

Dr. Baer, commenting further on the role of the church in the midst of a global environmental crisis, said:

"The church today faces a new task, namely how to encourage a greater sense of responsibility for our natural environment." "If The Earth is The Lord's . . .," ESR Report, No. LXXVI (Winter, 1969-70), 1.

"The church today stands at a time of decision. If she is to remain true to her prophetic heritage, she must confront the power structures of society with a fresh and cogent ethic of land usage. She must also explore new avenues of action-involvement, as she already has begun to do in such areas as race relations, poverty and issues of war and peace." "Land Misuse: A Theological Concern," The Christian Century, LXXXIII (October 12, 1966), 1241.

<sup>42</sup> John B. Cobb, Jr., "Ecological Disaster and the Church," The Christian Century, LXXXVII (October 7, 1970), 1186-1187.

David Graham and Robert Theobald, in a paper written for the National Council of Churches, envisioned the mission of the church as helping man create a new world through the employment of the concept of stewardship. Speaking of stewardship, Graham and Theobald explained:

. . . the gist of stewardship is expressed in the old revivalist chant: Saved for Service. The Church must discover ways to serve the world so that Christ is increased: so that the potential of people, societies and ecological systems becomes fulfilled.<sup>43</sup>

For Graham and Theobald, the actual deployment of their particular concept of stewardship will only become fully realized as the church gains a new vision of the world "as an open, changing universe--as a field-of-force."<sup>44</sup> In a world where there has been a fundamental shift from the Newtonian view of a perfectly stable universe to the Einsteinian view of an open ended universe, the church, so Graham and Theobald have contended:

. . . is . . . in a favorable position to bring together the scholars at the leading edge of all the disciplines to translate this physical science view into terms "hearable" by the society. It seems that one key insight, already emerging, is that we are moving from an industrial-age model characterized by competition and force between fragmented individuals and groups, to a cybernetic era communication model characterized by cooperation and process between interlinked individuals and groups. To make this clear we need new metaphors which translate the universe from mechanistic to organistic terms.<sup>45</sup>

Several religious bodies have incorporated statements on ecological policy into their platform of resolutions as adopted by their organization's general assembly. The National Association of Evangelicals is a notable example. Their policy statement on ecology adopted in 1970,

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<sup>43</sup>David Graham, and Robert Theobald, "The Changing Environment: Does the Church Have a Major Responsibility?" National Council of Churches of Christ in the U. S. A., October 2, 1969, p. 23. (Mimeographed.)

<sup>44</sup>Ibid., p. 24.

<sup>45</sup>Ibid., pp. 24-25.

appears as follows:

Scientists are alarmed. Many assert that runaway technology, pollution and consumption, if left uncontrolled, could spell the extinction of the human race.

The age of affluence has been very much an age of waste. There is the problem of disposing of mankind's waste products. One day billions could be struggling literally for a last breath.

Beyond the scientific, biological and political ramifications of our environment problem is a basically theological and religious issue. Men who thoughtlessly killed animal life to the point of extinction a hundred years ago might not have realized the implications of their actions. Today those who thoughtlessly destroy a God-ordained balance of nature are guilty of sin against God's creation.

When God looked on what He had made, He called it good. Christians should remember that they were entrusted with the stewardship of all God's earthly creation and resources (Psalm 8:6-8; 50:10, 11). Even though we believe Christ will return before man can utterly destroy himself, we also believe future generations have as much right to enjoy this world, and make it fruitful, as we.

The National Association of Evangelicals therefore calls on all Christians to ensure this right and so fulfill the biblical commission to subdue and replenish the earth.

We commend President Nixon and all government and private institutions and corporations who are involved with an announced determination to salvage our environment.

We pledge ourselves to support every legitimate effort to maintain balance in ecology, preservation of our resources, and avoidance of the cluttering of our natural beauty with the waste of society.<sup>46</sup>

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<sup>46</sup> National Association of Evangelicals, "Ecology," Policy Resolutions Adopted by the National Association of Evangelicals, 1970.

The 183d General Assembly of The United Presbyterian Church in the United States of America adopted a rather lengthy thirteen point policy in 1971, concerning the church's action with regard to the "ecocidal development." Basically, their recommendations can be classed under three functions. First, the church is to contribute to the process of developing conservation policy wherever it might occur. Secondly, the church is to inform its constituency of current conservation issues. Thirdly, concerted effort is to be made to mobilize public opinion where clear-cut issues exist and help bring such opinion to bear upon appropriate legislative bodies and processes. "Environmental Crisis, A Statement on Environmental Renewal," Church and Society, LXI (July-August, 1971), 21-26.

Environmental stewardship. Dr. Harold B. Kuhn, Professor of Philosophy of the Christian Religion at Asbury Theological Seminary, the first person to encourage this writer to pursue the theological significances of the developing ecological crisis, has advocated that the Christian assume a position of stewardship in dealing with the current problems of environmental dysfunction. Speaking of this stewardship, Dr. Kuhn said:

Taken seriously, the concept of biblical stewardship will permeate human life with the conviction that man holds his environment in trust, under God. It will remind man that abuse of his trust will bring, not only a searing final judgment from the God under whom man lives, but strong intermediate judgments in the form of impoverished lives and hungry bodies. It is in these terms that our decision-makers need to be reminded of the consequences of an outraged environment.<sup>47</sup>

Dr. Baer has also agreed that environmental stewardship is the wanted affirmation. Referring to the meaning of good environmental stewardship, Professor Baer concluded, that to be a trustworthy steward of the environment:

. . . is not simply to recycle glass and aluminum cans or to use low-lead gas--as important as these may be. It is rather the willingness to affirm the basic goodness of life and accept the YES that God in Christ has spoken to each of our lives. It is a far more radical step than that we usually include under the label of conservation. It is to believe that we need not be so compulsively acquisitive and so relentless in our quest for more and more power in our pathetic and largely futile attempts to find security in this changing world. It is to understand that man is not meant only to analyze, dissect, and objectify the world but also to be open to its essential mystery, to care for it, to love it. It is at its deepest level nothing less than the

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<sup>47</sup> Harold B. Kuhn, "Environmental Stewardship," Christianity Today, XIV (May 8, 1970), 47.



willingness to die to an inadequate and obsolete way of life so that we may be reborn into the new age.<sup>48</sup>

## ECOLOGICAL BIBLIOGRAPHY

Over the past several years, at least three bibliographical surveys have been constructed in an effort to deal with the ever broadening base of literature which will eventually form the basis for a thorough exposition of the theology of ecology. During the same time period, students from two seminaries; viz., Asbury Theological Seminary and Episcopal Theological School have compiled extensive bibliographies covering both secular and theological literature which will shed light upon the development of a Christian approach to the ecological crisis.

### Surveys

Kenneth P. Alpers, Special Assistant to the Executive Director, Commission on Research and Social Action, the American Lutheran Church has formulated a bibliographical survey through which he has striven to arrive at a starting point for an ecological theology by the careful analysis of the pertinent literature on the basis of three different historical perspectives. Firstly, Alpers uncovered the developing history of the problem through an examination of such books as Fairfield Osborn's Our Plundered Planet, 1948, and William Vogt's Road to Survival, 1948. Secondly, the author dealt with the broadening base of the problem from the standpoint of human population and technology. R. Buckminster Fuller's Utopia or Oblivion: The Prospects for Humanity and R. J. Forbes' The Conquest of Nature: Technology and Its Consequences, are examples of the kinds of books the author referred to in dealing with this second

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<sup>48</sup> Richard A. Baer, Jr., "Environmental Turnabout," 1972. (Mim-eographed.)

area. Thirdly, Mr. Alpers reviewed the developing ecological perspective through a careful inquiry into the contributions to the field of ecology made by such men and their works as Philip Wagner's The Human Use of the Earth, and Raymond Dasmann's Environmental Conservation.<sup>49</sup>

Wilbur L. Bullock, the writer of a bibliographical review entitled, "Ecology and Apocalypse," has interpreted the contribution made by four authors and their books; viz., Francis Schaeffer's Pollution and the Death of Man, H. Paul Santmire's Brother Earth, This Little Planet edited by Michael Hamilton, and Gordon Rattray Taylor's The Doomsday Book.<sup>50</sup>

Robert K. Zuck, a well-known botanist and conservationist, on the Drew University Faculty, has commented on the origins and present state of ecology by taking note of several important books in the field. Professor Zuck made reference to Anton Kerner von Marilaun's (1831-1898) book, The Plant Life of the Danube Basin, Paul Sears' Deserts on the March, Rachel Carson's the Sea Around Us and Silent Spring, and Stewart Udall's The Quiet Crisis and 1976: Agenda for Tomorrow. The author also made a passing reference to Frederick Elder's Crisis in Eden; he agreed with Elder that the church can and must become involved in the solution of the crisis of man's survival in a harmonious environment on this planet.<sup>51</sup>

### Lists

While a student at Asbury Theological Seminary, this writer enrolled in Philosophy 32, Social Applications of Christianity during the

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<sup>49</sup>Kenneth P. Alpers, "Starting Points for an Ecological Theology: A Bibliographical Survey," Dialog, IX (Summer, 1970), 226-232.

<sup>50</sup>Wilbur L. Bullock, "Ecology and Apocalypse," Christianity Today, XV (April 23, 1971), 20-21, 24.

<sup>51</sup>Robert K. Zuck, "Conservation and Ecology," The Drew Gateway, XL (Winter, 1970), 102-107.

winter quarter of 1970, and began collecting data concerning both the scientific and theological aspects of the developing ecological crisis. By the end of the term a sizable bibliography had been collected which formed the basis for an extensive paper entitled, "Man in Relation to His Environment: A Theological Perspective." Dr. Harold B. Kuhn also used this bibliographical data as the basis for an article he wrote for Christianity Today.<sup>52</sup> Later, under the direction of Professor Kuhn, this bibliography was reproduced and made available to the public. This bibliography has been appended to this paper and appears in the Table of Contents as Appendix A, "Asbury Theological Seminary Bibliography."<sup>53</sup>

Episcopal Theological School in Cambridge, Massachusetts, has compiled an extensive bibliography, some one hundred and sixty-five entries, dealing with the historical and theological perspectives of the ecological crisis on three levels; viz., the Christian tradition, ecological perspective, and ecological problems. This valuable bibliography, too, has been appended to this paper and appears in the Table of Contents as Appendix B, "Episcopal Theological School Bibliography."<sup>54</sup>

## SUMMARY

According to this writer's bibliographical analysis, the ever broadening spectrum of religious periodical literature dealing with the theological

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<sup>52</sup>Kuhn, "Environmental Stewardship," op. cit., p. 46.

Dr. Kuhn credited this writer by saying: "I am indebted to one of my students, Dwight U. Nelson, for excellent bibliographical data on the specifically religious aspects of the question."

<sup>53</sup>Dwight U. Nelson, "Bibliography on Ecology," (Wilmore: Asbury Theological Seminary, 1970). (Mimeographed.)

<sup>54</sup>"Pro-Seminar: Historical and Theological Perspective on the Ecological Crisis," (Cambridge: Episcopal Theological School, 1971). (Mimeographed.)

aspects of the current ecology crisis was found to fall quite naturally into three main categories; viz., ecological ethics, ecological theology and ecological bibliography.

The ecological crisis has forced religious ethicists to expand the scope of man's moral responsibility to include his relationship to all creatures and things, the organic as well as the inorganic. The mainstream of orthodoxy acknowledges man's responsibility as the culpable agent whose abuses have led to the current environmental dilemma and the sufficiency of biblical ethics to establish a fuller understanding of man's relationship with nature.

As the scientific community and secular news media have identified the rapidly expanding environmental crisis as a legitimate human concern, a number of theologians have arisen who are endeavoring to relate theology meaningfully to the problem. They have found that man is not only a vital part of the natural order but that he is also over nature, a steward responsible for its wise care and use. The Bible makes it quite clear that man's dominion over nature is not license for indiscriminate exploitation, but rather provides for the maintenance, care and protection of the created order. The church has been called upon to challenge society's inverted value system and communicate the full meaning of environmental stewardship.

The emerging development of ecological bibliographies has served not only to inform the reader of those works directly concerned with the ethical or theological implications of the environmental crisis, but also with a plethora of secondary sources, books as well as periodicals, which one day may contribute to a more thorough understanding of the theology of ecology.

Since the appearance of Francis Schaeffer's brilliant book, Pollution and the Death of Man, a growing number of books are being published which endeavor to interpret the ecological crisis from the perspective

of Christian theology and particularly evangelical theology. The following chapter has been constructed in the attempt to uncover the distinct contribution of a number of such sources.

## Chapter 4

### BOOKS: THEOLOGY OF ECOLOGY

Emerging book-length introductions to the rapidly expanding field of eco-theology have marked a definite point of growth in the development of the literature from the more fragmentary approach of the periodical to an increasingly inclusive account of pertinent Christian doctrine. Whereas, recent religious periodical literature has dealt with only portions of the theological significance of man's ecological crisis, e.g., ethics, stewardship, or dominion, some contemporary theologians are endeavoring to give a fuller account of the causes behind the impending environmental catastrophe and an increased understanding of the alternatives available to man.

For the most part, theologians within the mainstream of Christian orthodoxy have agreed that the heart of the ecological crisis is a spiritual problem. Because of man's willful sinfulness originating in the Adamic Fall, he has separated himself from God, from himself, from other men, and from nature. Differences of opinion, however, have become apparent in dealing with the means by which these bifurcated relationships can be restored.

This present chapter has marked the attempt on the part of this writer to analyze the contributions made by a selected number of authors and their books to a developing eco-theology. Anchored upon four first-order subdivisions, viz., cause of the ecology crisis, ecological ethics, theology of nature, and theology of ecology, the chapter moves in its treatment of those who have accused Christianity of causing the ecology crisis to those who affirm the Christian religion as the only viable alternative for man in an ecologically disturbed environment.

## CAUSE OF THE ECOLOGY CRISIS

The message that man is in the midst of an environmental crisis of global proportions has proven to be a very accurate and disturbing diagnosis. Population growth and technology seem to be out of control as millions of our race are malnourished and hungry, our urban areas are growing more dense and more afflicted, and our air and water are fouled with toxic by-products and wastes. Mankind can hardly be regarded as living in harmony with nature. Instead, he seems to be moving steadily toward disaster, helpless to counter the destructive results of environmental pollution and exploitation, and apparently unwilling to bring these destructive processes under control. How did man get himself into this predicament?

### Christianity

A growing number of men whose writings attract wide interest have laid the blame for the ecological crisis squarely on Christianity. Two of the most widely known proponents of this view are Ian L. McHarg and Lynn White, Jr..

Ian L. McHarg. One of the most vocal spokesmen for this point of view is Ian McHarg of the Department of Landscape Architecture, at the University of Pennsylvania. In his recent book, Design with Nature, McHarg stated:

The great western religions born of monotheism have been the major source of our moral attitudes. It is from them that we have developed the preoccupation with the uniqueness of man, with justice and compassion. On the subject of man-nature, however, the Biblical creation story of the first chapter of Genesis, the source of the most generally accepted description of man's role and powers, not only fails to correspond to reality as we observe it, but in its insistence upon dominion and subjugation of nature, encourages the most exploitive and destructive instincts in man rather than those that are deferential and creative. Indeed, if one seeks license for those who would increase radioactivity, create canals and harbors with atomic bombs,

employ poisons without constraint, or give consent to the bulldozer mentality, there could be no better injunction than this text. Here can be found the sanction and injunction to conquer nature--the enemy, the threat to Jehovah.

The creation story in Judaism was absorbed unchanged into Christianity. It emphasized the exclusive divinity of man, his God-given dominion over all things and licensed him to subdue the earth.<sup>1</sup>

Lynn White, Jr.. The most widely quoted paper on this subject has been "The Historical Roots of our Ecologic Crisis," by Lynn White, Jr.. White has made a more scholarly presentation than McHarg but comes up with essentially the same indictment against Christianity; viz., that Christianity bears a huge burden of the guilt. His conclusion is important:

Both our present science and our present technology are so tinctured with orthodox Christian arrogance toward nature that no solution for our ecologic crisis can be expected from them alone. Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not.<sup>2</sup>

Commenting further upon his personal beliefs, Professor White offered Saint Francis of Assisi as an alternative Christian view. He urged:

We must rethink and refeel our nature and destiny. The profoundly religious, but heretical, sense of the primitive Franciscans for the spiritual autonomy of all parts of nature may point a direction. I propose Francis as a patron saint for ecologists.<sup>3</sup>

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<sup>1</sup> Ian L. McHarg, Design With Nature (Garden City: The Natural History Press, 1969), p. 26.

<sup>2</sup> Lynn White, Jr., "The Historical Roots of Our Ecologic Crisis," Science, CLV (March 10, 1967), 1207.

<sup>3</sup> Ibid.

Referring to McHarg and White's indictment against Christianity as the cause for the ecological crisis, biologist Richard Wright of Gordon College remarked: "That to lay the blame for the ecological crisis on Christianity is to misread history. The great damage this accusation may do is not in discrediting Christianity--I think the Christian faith will survive the attack--but in convincing some that the accusation is true, it puts the emphasis for action in the wrong arena. Christianity has become the scapegoat for human failure. It is not religious belief, but human



## Technology

Some have cited technology, the systematic knowledge of applied science, as being the fundamental cause of the ecological crisis. They are convinced that our polluted environment has resulted from modern industrial man's worship of the god, Technology. This indictment against technology seems to carry the search for the originating cause much closer to the truth. Whereas, McHarg and White posited the cause with the Christian religion, upon that which was essentially revealed to man, others have pointed to a complex by-product of man's ingenuity as the essential first-cause.

Dorothy M. Slusser and Gerald H. Slusser. The Slussers, both trained meteorologists, have long been concerned with the environment. Mrs. Slusser has been a teacher for Braniff International Airways and is an author in her own right. Dr. Gerald Slusser, formerly a Braniff pilot, is a graduate of Austin Theological Seminary and the University of Texas.

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greed and ignorance which have allowed our culture to come to the point of ecological crisis." "Responsibility for the Ecological Crisis," Christian Scholar's Review, I (Fall, 1970), 40.

Allan Harder, a doctoral candidate at the University of Indiana and formerly a member of the faculty at Lycoming College, paralleled Wright's assessment when he said: "As for the actual historical etiology, one could easily get the impression from reading White and McHarg, that Christianity and only Christianity, has significantly contributed to environmental depredation, a very strong claim which seems to be quite false. Disregard for the integrity of non-human nature seems quite widespread presently, and by no means directly traceable to supposed Christian influences, as pollution of all sorts in the Soviet Union, the sub-continent of Asia, and Africa plainly indicates. The case is strong that this has been true in the past as well. The Chinese, Greek, Roman and Moslem civilizations did their shares of damage through deforestation, erosion, and over-grazing. Rene Dubos remarks somewhere that in many areas of ancient times the goats were as efficient in seriously denuding the landscape as are bulldozers today." "Ecology, Magic and the Death of Man," Christian Scholar's Review, I (Winter, 1971), 119-120.

He is presently Professor of Theology and Education at Eden Theological Seminary.

The Slussers have maintained that the theological, social, and scientific views of modern man have played a goodly part in both the creation of the god Technology and in the failure of technology always to provide thoroughly reliable solutions to environmental problems.

One of the false assumptions of the technological age has been that "growth is always good." Referring to this fallacious concept, the Slussers stated:

This idea stems basically from the economic goals of the commercialized civilization and the assumption of endless evolution with man himself leading the way and scientific technology providing the means. Our modern "growth" societies, with their expectation of an ever-increasing standard of living, are the logical outcome.<sup>4</sup>

The ascendancy of technology has been largely inevitable because, according to the Slussers, as "man has lost his sense of connection with creation and has severed his cultural adventure from God, the only place to turn for meaning is to himself."<sup>5</sup>

This inward turning of man in order to find ultimate meaning has produced an attitude which has led him to believe that things are to be considered as means to an end. Enlarging upon this insight, the authors reflected:

The major mischief in man's present world view is his assumption that everything in the world except himself is merely a means to an end and the end is the greater happiness (material welfare) of man. The intellectual pilgrimage of man since the Middle Ages (though certainly with earlier historic roots) has been from the position of seeing his life's goal in the religious image of salvation to a goal of earthly happiness conceived as material welfare and provided by

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<sup>4</sup>Dorothy M. Slusser, and Gerald H. Slusser, Technology - The God That Failed (Philadelphia: The Westminster Press, 1971), p. 42.

<sup>5</sup>Ibid., p. 47.

technology. Our future does not lie in a return to the views of the medieval period, even if that were possible. If man is to have a future, it will come through desacralizing technology, recognizing that as a god it has failed, and adopting a set of ways of thinking about God, man, and nature which are ecologically viable; in short, it means a new set of values. These will not by any means be unrelated to the past. We dare not carelessly throw away the heritage of the human race, for as Santayana reminded us, those who do not learn the lessons of history are doomed to repeat them.<sup>6</sup>

If the tragedy of complete environmental annihilation is to be avoided, the gods of population, progress, and profit (the very essence of technology as the Slussers have defined it) will have to be overthrown and abandoned. So stated, the authors have suggested:

. . . such a reversal of modern industrial philosophy is vital, if man is to survive, is to question the basic premises, assumptions, and goals on which that philosophy is based. It is the conclusion of this book that this philosophy must not merely be questioned, but abandoned entirely. . . . On every hand we are being warned that unless industrial society, and that includes all forms in the entire political spectrum, is almost instantly reformed, in only a few more years the world will be uninhabitable. It remains to be seen whether or not it is too late, particularly in<sup>7</sup> view of the fact that so much of what we have done is irreversible.

## ECOLOGICAL ETHICS

Theology's present concern for eco-ethics will be short-lived and ineffectual unless it deals with the attitudes and values which have lead to current levels of environmental deterioration. The basic disease is man's exploitative spirit which has prompted him to plunder the earth. Ethical considerations must be prepared not only to deal with a growing succession of symptoms but also with the basic causes themselves. Since man is at the center of the ecological crisis as both the effector and the affected and Christianity offers the only viable alternative, it is imperative

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<sup>6</sup> Ibid., pp. 140-141.

<sup>7</sup> Ibid., pp. 60-61.

that the zone of Christian ethics be extended to man in his total environment.

### J. Frank Cassel

Dr. J. Frank Cassel is Professor of Zoology at North Dakota State University. In his paper entitled, "The Christian's Role in the Problems of Contemporary Human Ecology," Professor Cassel inquired, "Why, amid fabulous technology and extraordinary intellectual reserves, does man find himself in an ecological crisis at all?"<sup>8</sup> Continuing to reflect, he asked, "Why, as things get worse, is a drastic cure so long in coming?"<sup>9</sup> Because, Cassel pointed out, "most of us are acting with more concern for our selves than for our grandchildren."<sup>10</sup> This trend toward self-centeredness has become pronounced because "The basic problem of contemporary human ecology is selfishness and selfishness is in. The wages of sin is death. The biotic world is dying!"<sup>11</sup>

Dr. Cassel has maintained that the self-less love ethic of Christianity will alone be able to help man solve his most pressing environmental problem which ". . . is really not either know-how, or environmental resources, or even population but simply the motivation for applying what we already know."<sup>12</sup> Quoting from George Harrar's paper entitled, "Ecological Crisis Demands New Ethic of Responsibility," Cassel shared that "The first principle of the new ethic would be that man must control

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<sup>8</sup> J. Frank Cassel, "The Christian's Role in the Problems of Contemporary Human Ecology," Environmental Ethics, Studies of Man's Self-Destruction, ed. Donald R. Scoby (Minneapolis: Burgess Publishing Company, 1971), p. 165.

<sup>9</sup> Ibid.      <sup>10</sup> Ibid.      <sup>11</sup> Ibid.

<sup>12</sup> Ibid., pp. 160-161.

his own fertility.'" <sup>13</sup> As someone has pointed out in relation to Genesis 1:28, ". . . we have already abundantly fulfilled the command to "multiply and replenish" and that now it's high time to get on with "have dominion over" in a responsible way." <sup>14</sup>

The author endeavored to enunciate a principle of balance between use and abuse, between consumption and conservation. For him it was not an "either-or" type of situation because "Conservation means WISE USE! When we discuss the Christian's role in ecologic problems, we are trying to gain wisdom not to question the right to use natural resources." <sup>15</sup> Because man is the ecological "superdominant," Cassel remarked, analogously:

. . . I doubt that we can reasonably say that the roots of blame for destruction of an aspen grove by a beaver dam lies in the beaver's religious heritage. The nature of the species called "beaver" is to build dams in which he builds his lodge, stores his food and on which he floats the aspen cuttings which he uses for both. Just so, as Richard Wright (1970) has recently observed, the nature of man is to dominate the natural communities of which he is a member regardless of his religious heritage or current persuasion, Homo sapiens can be called a super dominant, not only because he is dominant in otherwise disturbed habitats, but also because he can alter the environment to suit his needs and desires.

Just here, perhaps, is a unique character of man--he desires. We do not need the Bible to point out that often these desires center on ourselves rather than on good for others. The Bible does point out, however, man's responsibility for his environment, as a good steward and husbandman (Genesis 2: 15, etc.). <sup>16</sup>

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<sup>13</sup> Cassel, "The Christian's Role," p. 161, citing George Harrar, "Ecological Crisis Demands New Ethic of Responsibility," Catalyst, I (Summer, 1970), p. 23.

<sup>14</sup> Ibid.

<sup>15</sup> Ibid., p. 158.

<sup>16</sup> J. Frank Cassel, "Ecology, God and Me," Environmental Ethics, Studies of Man's Self-Destruction, ed. Donald R. Scoby (Minneapolis: Burgess Publishing Company, 1971), p. 226.

Norman L. Geisler

Dr. Geisler, who is presently Chairman of the Department of Philosophy of Religion at Trinity Evangelical Divinity School, Deerfield, Illinois, has written what Dr. Harold B. Kuhn referred to as "An exceptional and long-awaited Evangelical handbook to modern ethical thought." Most exciting and reassuring has been the fact that Professor Geisler has faced what, perhaps, is the most interesting contemporary subject, "The Christian and Ecology," with candor of expression and depth of thought.

The author has broken his presentation into three main subdivisions; viz., "A Biblical Basis for Ecology," "Ecology and the Intrinsic Value of Persons," and "Ecology and the Moral Duty to Control Man's Environment."<sup>17</sup>

In establishing a biblical basis for ecology, Geisler pointed first to the fact that "Both testaments of Scripture support the contention that matter is good and that the natural world is god-like."<sup>18</sup> Reinforcing the essential value of creation, he emphasized that the material creation is good and that it reflects the glory of God. The Incarnation has also acted to enhance the meaning of creation and the fundamental goodness of materiality.<sup>19</sup>

In discussing the relationship between ecology and the intrinsic value of persons, Dr. Geisler opened with a question; i.e., ". . . if persons are more valuable than things, . . . , then how can marring material creation be considered a sin?"<sup>20</sup> He resolved the dilemma by stating again the rationale for personalism; viz., that persons have intrinsic value and that all evil is a misuse of person.<sup>21</sup> The basic rule is that ". . . persons

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<sup>17</sup> Norman L. Geisler, Ethics: Alternatives and Issues (Grand Rapids: Zondervan Publishing House, 1971), pp. 250-259.

<sup>18</sup> Ibid., p. 250.

<sup>19</sup> Ibid., pp. 251-252.

<sup>20</sup> Ibid., p. 252.

<sup>21</sup> Ibid., p. 253.

are to be loved (as ends) and things are to be used as means to personal ends.<sup>22</sup> Finally, "Since God is the Source of all value and the One who determines value, then it would follow naturally that all sin--even sin against nature--would ultimately be against Him personally."<sup>23</sup>

Geisler determined that polluting the environment is morally wrong because pollution is basically selfish; i.e., man is willing to consume his gain from nature without thought for his fellow man or for future generations.<sup>24</sup> Pollution is also wrong because it affects people adversely and it violates God's laws which were intended to govern the relationship among persons and things.<sup>25</sup>

Lastly, the author reminded the reader that it is man's solemn moral duty to control his environment. Thinking upon God's commandment for man to master his environment, Dr. Geisler stated:

If man is morally responsible for controlling his physical environment, then it may be necessary for him to legislate the use of the elements. That is, there must be controls on the unwise and selfish use of the earth at the expense of other persons who live here. Men must not be permitted to destroy the physical environment of other men.<sup>26</sup>

### Peter A. Jordan

Peter A. Jordan is Assistant Professor of Wildlife Ecology in the School of Forestry at Yale University, New Haven, Connecticut. Dr. Jordan has placed himself in the camp of those who view "man as life unnecessarily complicated by consciousness."<sup>27</sup> The resulting ethical

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<sup>22</sup> Ibid., pp. 252-253.

<sup>23</sup> Ibid., p. 254.

<sup>24</sup> Ibid., pp. 254-255.

<sup>25</sup> Ibid., pp. 256-257.

<sup>26</sup> Ibid., pp. 257-258.

<sup>27</sup> Peter A. Jordan, "An Ecologist Responds," A New Ethic for a New Earth, ed. Glenn C. Stone (New York: Friendship Press, 1971), p. 86.

mood as described by Jordan is:

. . . a step forward in search of the great philosophical-anthropological revolutions of the 19th and 20th centuries, suggested by the names of Darwin . . . Huxley, Simpson, Dobzhansky, and their contemporaries including, yes, Teilhard de Chardin.<sup>28</sup>

In an attempt to interpret the God-Man-Nature relationship with respect to "simplistic and doctrinaire Christianity," Dr. Jordan said:

. . . it appears perfectly reasonable on the basis of what is implied in the New Testament, that the world is but a field where souls are raised and tested for the sake of their subsequent infinite happiness (if they play it smart) and for God's pleasure.<sup>29</sup>

Furthermore, if the foregoing assumption is correct, that is, said Dr. Jordan:

If the world is indeed a soul farm or souling pond as is alluded to indirectly in many of the words attributed to Christ, we, by employing our supposedly God-given rationality, would conclude that God wants to maximize his harvest, just as farmer and fisherman strive universally to maximize their harvests. If a few souls please God, won't his pleasure increase in direct proportion to an increase in souls? Scholarly interpretations aside, I would bet that this conclusion underlies a lot more Christian thinking than most of us would like to admit.<sup>30</sup>

The author maintained that this type of theological reasoning has accounted for a remarkable decrease in the qualitative aspects of all living creatures. For example, man derived much benefit from his usage of DDT (before it was banned), but at the same time this chemical and its near relatives brought several species of birds close to extinction. Indicating that a balance between the quantitative and qualitative aspects of the environment must be maintained, Professor Jordan observed:

To generalize by saying that we can both raise more people and save all the birds may, up to a point, be theoretically correct, but in the real world of everyday decisions, the notion is mostly irrelevant. History records that whatever might have been in actuality,

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<sup>28</sup> Ibid.

<sup>29</sup> Ibid., p. 87.

<sup>30</sup> Ibid., p. 88.



most natural-resource decisions favor one party over the other: either the quantitative increase of man or the qualitative preservation of the environment. There are, of course, many instances in which both were disfavored but very few instances in which both were favored. The environmentalist of today seeks a qualitative increase for man through a preservation and restoration of the qualitative aspects of his environment; he sees further quantitative increases in man as rendering qualitative increases impossible.<sup>31</sup>

After systematically depreciating what he felt was the position of orthodox Christianity, Jordan implied that the ultimate resolution of man's environmental crisis lay in a manward direction. In other words, he said:

What society needs is an ecological humanism: the humanist must counteract the misanthropic tendencies of ecologists, and the ecologists must make clear to the humanist that human life is an integral part of a beautiful system with definable limits. If these limits are exceeded, no matter how humanistic the intent may be, the consequences can be dehumanizing.<sup>32</sup>

#### Norman J. Faramelli

"Norman J. Faramelli is Associate Director of the Boston Industrial Mission, Cambridge, Massachusetts. . . . Ordained a priest in the Episcopal Church. . . , he has been a visiting lecturer at Andover-Newton Theological School."<sup>33</sup>

Dr. Faramelli has faced the emerging eco-ethic from the standpoint of economic justice for he believes that ". . . ecology is a profoundly serious matter, yet most of the solutions suggested for environmental quality will have directly or indirectly, adverse affects on the poor and lower income groups."<sup>34</sup> Hence, the author firmly deduced that

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<sup>31</sup> Ibid., p. 89.      <sup>32</sup> Ibid., p. 93.

<sup>33</sup> Richard E. Sherrell (ed.), Ecology: Crisis and New Vision (Richmond: John Knox Press, 1971), p. 11.

<sup>34</sup> Norman J. Faramelli, "Ecological Responsibility and Economic Justice," Ecology: Crisis and New Vision, ed. Richard E. Sherrell (Richmond: John Knox Press, 1971), p. 32.

economic or distributive justice must become an active component in all ecology debates. Couched in more theological terminology, Faramelli enunciated his belief that:

The Lord has entrusted man with the created order; he is to be a responsible steward of God's creation. Although the development of an environmental ethic is essential and long overdue, it should not overlook nor underplay the special role that man (particularly the poor and the oppressed) plays in the Judeo-Christian tradition. Now that an environmental ethic is being shaped, it is imperative that it be in harmony with concerns for economic justice.<sup>35</sup>

Referring to the misconception that it was the Judeo-Christian mandate that man should have dominion over nature which led to the ecology crisis, Professor Faramelli concluded that a "reformulation of a theology and ethic of nature is necessary."<sup>36</sup>

Determined that this ethical reformulation should not be divorced from the notions of distributive justice, the author indicated that such an environmental ethic:

. . . would recognize man's finitude and his place in the cosmos. He has been selected to be a custodian of God's creation and to transform the natural order for human welfare. But he must appreciate the limits of technical transformation. The side effects of all of his actions must be carefully calculated, and appropriate plans made to offset their negative effects. He must further understand that even the positive aspects of his technical transformations affect various people differently. The costs and the benefits of each technical modification are not shared equally, so the question of who pays the costs and who receives the benefits is essential. A new environmental ethic would attempt to distribute the costs and benefits justly.<sup>37</sup>

In order to manifest our ethical concerns, Dr. Faramelli urged that four things should be done simultaneously:

1. We should direct citizens to see the root causes of the ecological crisis. The nation must move beyond the anti-pollution fad and deal with causes, not symptoms. The myth that equates increased material prosperity with the "good life" has to be challenged.

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<sup>35</sup> Ibid.

<sup>36</sup> Ibid., p. 42.

<sup>37</sup> Ibid.

2. We should expose and oppose those who would use the current momentum of the ecology movement as the issue of the "silent majority," divorced from the needs of the poor. Rats, congested and dilapidated living spaces, a repressive atmosphere are part of urban ecology. The rat-infested apartment should not receive less ecological emphasis than bird sanctuaries!

3. We should thoroughly investigate the allocation of the costs of pollution control. Often those who receive most of the benefits pay only a small portion of the costs, and vice versa. Passing the cost to the consumer might affect the poor unfairly.

4. We should insure that the consequences of altering the economic growth rate become an integral part of all ecology discussions.<sup>38</sup> A new distribution of income and wealth must be reckoned with.

## THEOLOGY OF NATURE

Frederick Elder and Paul Santmire have emphasized, in their writings, the necessity for a complete re-evaluation of man's relation to nature. Their work has emerged as, essentially, religious studies of man and environment. Concentrating upon that part of a developing eco-theology concerned with man's relation to the "things" of the created order, they have attempted to show how man can be a part of nature without ruthlessly exploiting it.

### Frederick Elder

Frederick Elder, Pastor of the Faith Presbyterian Church in Minnetonka, Minnesota, has come to view the problem of man in relation to nature from the perspective of two theological polarities; i.e., inclusionism and exclusionism. The inclusionist school of thought, represented by such people as Rachel Carson and Loren Eiseley, have tended to include man in the realm of nature. While the exclusionists, supported by the ideas of such men as Pierre Teilhard de Chardin, Herbert Richardson,

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<sup>38</sup> Ibid., p. 43.

and Harvey Cox, have excluded man from the realm of nature.<sup>39</sup>

Loren Eiseley, perhaps the leading spokesman for the inclusionistic viewpoint, has underscored the essential balance and equilibrium of nature. The exclusionists' tendency to bifurcate man from nature, viewed by Eiseley as a dangerous duality, has lead to an increased concentration upon man as the measure of creation. For Eiseley man is to be seen as a part of nature but not at the center around which nature revolves.<sup>40</sup>

Proponents of the exclusionist position have imparted evidence of their knowledge of man as a part of nature, yet they treat him as though he were not. Teilhard de Chardin pictured man as evolving in an ever upward spiral culminating in his transcendency over nature at the Omega point. Describing de Chardin's position, Elder observed:

Teilhard optimistically sees man, or future man, the terminus of what is in process at present, turning into a single psychosocial unit, the presence of which will actually represent a new type of organism.

This organism will be the end result of the "hominisation" process, meaning that man will be truly human when there is perfect unity in diversity among humankind. The terminus is called Omega, and sometimes it is linked with God. . . .

In moving toward the transcendent state of Omega, man, to put it bluntly, crunches nature by the means of science and technology.<sup>41</sup>

The author has concluded that the answer for man's quest to find the proper balance between himself and nature lies somewhere between these two positions; viz., inclusionism and exclusionism. For he said, ". . . it can be seen that man is both apart from and part of the environment."<sup>42</sup>

Reverend Elder completed his presentation with a proposal for environmental balance which he called the "new asceticism." He specified that this "new asceticism" was to be founded upon three fundamental

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<sup>39</sup>Frederick Elder, Crisis in Eden: A Religious Study of Men and Environment (Nashville: Abingdon Press, 1970), pp. 14-17.

<sup>40</sup>Ibid., pp. 45-61.

<sup>41</sup>Ibid., pp. 65-66.

<sup>42</sup>Ibid., p. 145.

principles; viz., restraint, an emphasis upon quality existence, and reverence for life.<sup>43</sup> Restraint is here used to describe the limitation, moderation, and self-control needed to conserve consumable resources as well as constrain procreation. The second emphasis Elder noted "would be upon quality existence in contrast to the quantity existence that Western man now either has or is convinced he wants."<sup>44</sup> Lastly, reverence for life ". . . would come to mean an appreciation for any expression of life, based on scientific, aesthetic, and religious considerations."<sup>45</sup>

#### H. Paul Santmire

H. Paul Santmire is Chaplain and Lecturer in Religion and Biblical Studies at Wellesley College, Wellesley, Massachusetts. Santmire launched his approach to a theology of nature through an assesment of what he called "the ecological schizophrenia of the American mind." This environmental bifurcation, involving an intense adoration of the land coupled with its violent use, was described by Santmire as "a failure to meet the challenge of historical existence."<sup>46</sup>

This environmental dissociation, contended Santmire, began with the "nature versus civilization" movement of Henry David Thoreau in the form of his ethic of adoration.<sup>47</sup> The opposing force, "civilization versus nature," fathered by Descartes and Newton, ". . . began to take its obsessive modern form in the ethic of exploitation."<sup>48</sup>

The historical view of "nature versus civilization" has found expression in the contemporary milieu in the form of "the cult of the

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<sup>43</sup> Ibid.      <sup>44</sup> Ibid., p. 149.      <sup>45</sup> Ibid., p. 152.

<sup>46</sup> H. Paul Santmire, Brother Earth: Nature, God and Ecology in Time of Crisis (New York: Thomas Nelson Inc., 1970), p. 51.

<sup>47</sup> Ibid., pp. 16-28.

<sup>48</sup> Ibid., pp. 28-35.

rustic life."<sup>49</sup> Dr. Santmire has described it as a cult largely unarticulated. Of it, he said:

It is much more a presupposition of contemporary American life than a professed ideology. The Coopers and Parkmans and Thoreaus are no longer prominent, but vast numbers remain unconscious adherents of a watered down version of their religion: the flight to wild nature, the rejection of urban life.<sup>50</sup>

The contemporary manifestation of "civilization versus nature" founded in "the cult of compulsive manipulation" has uncovered our proneness ". . . to manipulate our environment with out question."<sup>51</sup> The spirit of this movement has prompted people to use each other and nature as mere things, means to an end, rather than as objects of essential worth and value.

Paul Santmire has suggested that the only way this ecological schizophrenia can be synthesized is to return again to the spiritual foundations of the Bible.<sup>52</sup> In view of needed biblical foundations, Santmire has called upon the Church to establish ". . . an ethic of responsibility built on a deeper understanding of our relationship to nature."<sup>53</sup> This ethic of responsibility, described by the author as a "theocentrism," ". . . will have a concrete shape, allegiance to the universal history of God: the Divine rule with all his creatures, man and the whole of nature, from the very beginning through the present to the final consummation."<sup>54</sup> Finally, according to Santmire, this ethic:

. . . will be predicated on a vision of the Kingdom of God and his righteousness as the ultimate framework for judging and inspiring moral action. No longer will either nature or civilization provide the ultimate norms for human life, either explicitly or implicitly, for both will be subordinated to the Kingdom of God.<sup>55</sup>

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<sup>49</sup> Ibid., p. 37.

<sup>50</sup> Ibid., pp. 38-39.

<sup>51</sup> Ibid., p. 45.

<sup>52</sup> Ibid., pp. 179-180.

<sup>53</sup> Ibid., p. 181.

<sup>54</sup> Ibid., p. 182.

<sup>55</sup> Ibid.

## THEOLOGY OF ECOLOGY

Ecology has been described as the study of the relationship of all living creatures to each other and to their environment. Theologically, the more traditional sounding expression "theology of nature," has been used to highlight a theology of man's involvement in physical reality. The term "theology of ecology" inevitably appeared as the byword for a movement intent on eliciting from man more sensitive action toward nature as well as a more contemplative relationship with it. Since the appearance of C. F. D. Moule's excellent reflection on biblical ecology, Man and Nature in the New Testament, however, the mood has changed considerably. Currently, theologians are emerging who are endeavoring to emphasize the integrity of nature as well as man's proper relationship to nature and to God in a more orthodox biblical framework.

Henlee H. Barnette

Henlee Hulix Barnette is Professor of Christian Ethics at the Southern Baptist Theological Seminary in Louisville, Kentucky. Dr. Barnette has written the most recent book having to do with the "theology of ecology," The Church and the Ecological Crisis. The heartland of his presentation appears in chapter five, "Toward a Theology for Ecology."<sup>56</sup>

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<sup>56</sup> In his comprehensive paper entitled, "Ecological Commitment as Theological Responsibility," Joseph Sittler made a distinction between "theology of ecology" and "theology for ecology." Speaking at Saint Xavier College in Chicago, he said: "I have been asked to speak about a theology of ecology or a theology for ecology, and I want to make a distinction. A theology for ecology is obviously demanded by the facts of the case. But it is rather a theology of ecology that I want to talk about. For if we start talking about a theology for ecology, we will try to manufacture out of uncriticized theological categories consequent moralistic efforts stretched to enclose new and crucial facts. Such an effort will not really be a redoing of theology in view of ecology but only an extension of traditional ethics in the presence of crisis. If that should happen, and if

First, a few words concerning Barnette's discussion of ecological ethics seemed important. He has laid great stress upon the need for adoration and reverence with respect to the development of an eco-ethic. But, the kind and type of authoritative support Professor Barnette marshalled behind his "elements of an ecological ethic" has made this writer seriously question his theological commitment.

Discussing an ethic of adoration, Barnette said, "An ecological ethic calls for recovery of a sense of adoration of nature."<sup>57</sup> At this point, however, one is just not sure what the author meant by adoring nature. He quoted Albert Camus as saying, "'When nature ceases to be an object of contemplation and admiration, it can then be nothing more than material for an action that aims at transforming it,'" (The Rebel, pp. 299-300). Francis Schaeffer in his book, The God Who is There, discussed Albert Camus as a French existentialist who advocated 'self-authentication.' By this Camus meant that the moral content of any situation is unimportant; what matters is that you choose and act.<sup>58</sup> If a man chooses to adore nature or exploit it is of little consequence; the important thing is the individual's choosing and acting. According to Camus, then, if you're not admiring or contemplating nature, you're busy trying to transform or exploit it. Without the vertical relationship with God, the

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uncriticized fundamental categories are simply reassessed and extended, we will get ecology in the textbooks on systematic theology probably as one part of eschatology! I can already envision the busy Jehovah's Witnesses adding to the eschaton, which they so gleefully anticipate, the ecological disintegration as the divine mechanism of catastrophe!" "Ecological Commitment as Theological Responsibility," Southwestern Journal of Theology, XIII (Spring, 1971), 35.

<sup>57</sup> Henlee H. Barnette, The Church and the Ecological Crisis (Grand Rapids: William B. Eerdmans Publishing Company, 1972), p. 38.

<sup>58</sup> Francis A. Schaeffer, The God Who is There (Downers Grove: Inter-Varsity Press, 1968), p. 24.



adoration of nature is an empty and aimless activity. Dr. Barnette never fully explained just exactly what he meant by the adoration of nature.

The author admonished the reader that the development of an attitude of reverence for all life is the next most important element of an ecological ethic. He cited Albert Schweitzer's "reverence for all life" as the supreme example. Schweitzer's ethics, he said:

. . . embrace man's attitude toward all of life, whether it flourishes in his backyard or on the other side of the world. No man is fully ethical, concludes Schweitzer, unless all of life is sacred to him, "that of plants and animals as that of his fellow man."<sup>59</sup>

Francis Schaeffer has pointed out that Schweitzer's God--Creation orientation was incorrect. Instead of viewing man's relation to nature in terms of his relationship with God, Dr. Schweitzer saw man only in terms of the created order of which he is a part. Commenting, Schaeffer remarked:

So Schweitzer identified himself with the hippopotamus, for he did not understand that man's relationship is upward; and therefore he looked downward to a creature which does many of the same things as himself.<sup>60</sup>

In his support of Schweitzer's concept of "reverence for all life," Barnette implied his corroboration of a rather low view of man.

This writer found it difficult not to be too judgmental of Henlee Barnette's approach to a theology for ecology. For example, in his introductory statements concerning the development of an eco-theology, Barnette observed:

Valuable insights for an ecological theology will come from other disciplines. From the philosophical perspective, relevant clues can be found in the works of Alfred North Whitehead and Charles Hartshorne. Scientists are also making significant contributions toward a theistic approach to the universe. Charles Birch and other scientists have a vision of God within the natural process. Writers in a variety of fields are becoming aware that the ecological issue is

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<sup>59</sup> Barnette, op. cit., p. 40.

<sup>60</sup> Schaeffer, op. cit., p. 95.

at its roots religious and cannot be solved without a radical religious outlook. Paul Goodman, educator and novelist, believes that "a kind of religious transformation" analogous to the Protestant Reformation is necessary to meet the environmental problem. The economist Kenneth Boulding advocates a dialogue with Eastern religions to learn how to live in harmony with nature.<sup>61</sup>

The author seemed almost syncretistic in his openness to the "good" in other disciplines and religions as potential parts of a developing eco-theology.

Professor Barnette introduced five elements of theological import which he deemed necessary components of a developing eco-theology; viz., creation, incarnation, covenant relationship, eschatology, and anthropology.

Concerning creation, Barnette acknowledged that God is the creator of the universe, but then he went on to say:

Since the middle of the nineteenth century, theologians have generally accepted the view that God employed evolution as an instrument in creating the universe over a period of billions of years. To the extent that the scientific theory of evolution does not pretend to explain the ultimate causation of the universe, it does not contradict the biblical view of creation. Rather it supplements it.<sup>62</sup>

It was interesting to note that in beginning with creation instead of, say, revelation, Barnette revealed a rather low view of the Bible. He definitely opposed a literal interpretation of the Genesis account of creation and stated that it contains numerous mythological motifs.<sup>63</sup>

The incarnation of God in the flesh is described as further evidence of the goodness of the material. The flesh, according to Barnette, is not to be seen as the source of sin, but as the "seat of sin." The emphasis here, though not expressly stated, is that as God created the material and Christ took on a real body, divine interest was expressed in the materiality

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<sup>61</sup>Barnette, op. cit., p. 64.

<sup>62</sup>Ibid., p. 66.

<sup>63</sup>Ibid., p. 67.

of the created order. In contrast to Gnosticism, God is not antagonistic to nature. Nor is any platonic view of nature encouraged which would deny the material essence of the universe.<sup>64</sup>

Stressing the importance of covenant relationship, the author said:

An ecological theology will take into account God's covenant relationship to the good universe that he created. His covenant with his people extends to the land (Lev. 25:1-7), as is implicit in the injunction to leave the ground fallow in the seventh year for conservation purposes (Exod. 23:10-11; Lev. 19:9).<sup>65</sup> When Israel's covenant with God was broken, the land suffered.

Accordingly, then, to mistreat the land is to break covenant with God.

Barnette's regard for eschatology is to be found in his view of ". . . creation as unfinished and in continuous process toward an ultimate goal."<sup>66</sup> His frequent references to de Chardin and Whitehead and evident support for some form of evolutionary process made it easy to assume that he was espousing a kind of process philosophy.<sup>67</sup>

Lastly, in reference to the biblical model of man, Dr. Barnette said, "An ecological theology will also call for a reappraisal of biblical anthropology."<sup>68</sup> He further remarked, and rightly so, that the traditional view that Genesis 1:28, was given as a mandate to subdue, dominate, and exploit nature for selfish ends must be shown for what it is--an unbiblical sanction for raping the earth. The current charge that Christianity is to blame for the environmental problem is preposterous according to Barnette. To hold that Genesis 1:28, provides man with a blank check for ruthless exploitation is bad hermeneutics. Man made in the Imago Dei must also be reappraised in light of our current dilemma.<sup>69</sup> The author closed his discussion of the pertinence of biblical anthropology to a developing ecology by saying:

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<sup>64</sup> Ibid., pp. 70-71.

<sup>67</sup> Ibid., pp. 75-76.

<sup>65</sup> Ibid., p. 72.

<sup>68</sup> Ibid., p. 78.

<sup>66</sup> Ibid., p. 75.

<sup>69</sup> Ibid., p. 79.

The biblical view of man is that of a "keeper," caretaker, custodian, curator of the oikos, the household of earth. Man is God's deputy to oversee, direct, and care for the environment. "Steward" is the New Testament term for this role of man in relation to the natural order. It refers to the manager or administrator of an estate. The first requirement of a steward is faithfulness, because he handles that which belongs to another.<sup>70</sup>

#### John B. Cobb, Jr.

John B. Cobb, Jr., who has an M.A. and a Ph.D. from the University of Chicago, is currently Ingraham Professor of Theology at the School of Theology at Claremont, California.

Searching for a meaningful alternative for ecologically troubled man, Dr. Cobb has become convinced that the only answer lies in the establishment of "a new Christianity." This "new Christianity," as Professor Cobb has called it, would follow the tradition of Christian devotion as set forth by Francis of Assisi and Albert Schweitzer. The author has found that Schweitzer's ethic of "reverence for all life" transcended or extended Saint Francis' effort and thereby has emerged as the most relevant, contemporary environmental model.<sup>71</sup>

The author has concurred with Frederick Elder's proposal for a "new asceticism" in order to establish environmental balance. As the world faces the fact of the finitude of its resources and the frightening pollution being caused by the present rate of production and consumption, Cobb urged:

. . . we must move forward to a new asceticism, an ecological asceticism. We must find ways of reducing our destruction of the environment and of making irreplaceable resources last longer.<sup>72</sup>

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<sup>70</sup> Ibid., p. 81.

<sup>71</sup> John B. Cobb, Jr., Is It Too Late? A Theology of Ecology, Faith and Life Series (Beverly Hills: Bruce, 1972), pp. 48-50.

<sup>72</sup> Ibid., p. 58.

Explicating further the need for "a new Christianity," Dr. Cobb remarked in teaching that man alone is made in the image of God, traditional Christianity has established him as lord over all other creatures. Furthermore, he said, "It sometimes so accentuates man's supreme and unique importance that all other things become mere means to his ends. This tendency has dominated Western Christendom."<sup>73</sup> For this reason, in Cobb's estimation, traditional Christianity in the West has been steadily declining in its influence as a model for environmental commitment.<sup>74</sup>

Humanism, the major successor to Christianity according to the author, has shifted ". . . the real focus of the sacred to man. In this way, the process of separating man from his fellow creatures, already begun in traditional Christianity, is completed."<sup>75</sup> But, because of its inability to state clearly where its commitment lies, ". . . like traditional Christianity, humanism is declining."<sup>76</sup>

Next in the succession of philosophies vying for the attention of man has come secular atheism. Dr. Cobb described it as a philosophy in which ". . . nothing is sacred, or ultimate, or absolute."<sup>77</sup> Elucidating further, the author stated:

There are no basic commitments, only provisional ones. Everything is seen as means to ends which are themselves judged by their contributions to further ends. All belief in the sacred is perceived as a threat to the needed pragmatic rationality.

Secular atheism has two conflicting tendencies in relation to the subhuman world. On the one hand . . . it deflates human pretensions to distinctiveness and thinks of man as much more like the other animals. On the other hand, it subscribes to the thoroughly man-centered philosophies of empiricism and positivism. Furthermore, the recognition of kinship between man and the other animals tends rather to disparage the worth of man as an object of concern than to encourage concern for other living things. Secular atheism is closely

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<sup>73</sup> Ibid., p. 117.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid., p. 118.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid., p. 119.

associated with the technological attitude and tends to apply it even to the treatment of men.<sup>78</sup>

Now, largely in reaction to secular atheism, there has arisen a "fresh and vital paganism" in which "men are rediscovering the sacred in the dance, in communal intimacy, and in the mysteries of bodily feeling."<sup>79</sup> In general, Professor Cobb said:

. . . the new paganism, like the old, is far more in tune with the vitalities and rhythms of nature than are traditional Christianity, humanism, and secular atheism. The sacred is found not only in human community and bodily ecstasy but in the natural environment as well. The healing of man and society is regarded as requiring a new balance and harmony with the subhuman world. Men must find themselves in and with the natural processes rather than outside and against them.<sup>80</sup>

Neither humanism, secular atheism nor the new paganism have provided man with the focus needed for a long-term commitment to the healing of his natural environment. "The concern we need to extend to all things," said Dr. Cobb referring to the essence of his concept of a "new Christianity," "is better symbolized by stewardship than by commitment."<sup>81</sup> Reflecting further he said:

To commit ourselves either to individual living things or to the sum total of all would inhibit responsible stewardship rather than promote it. Stewardship must be governed not only by respect for the goodness things embody but also by a vision of the good that is yet to be realized.

Yet stewardship is not an adequate concept either.

The better image is of a participant in a process of healing and growth.<sup>82</sup> Such a participant has responsibilities, but he is not the master.

In Whiteheadian fashion, Cobb described the process within which we can work as being ". . . not identical with the individual things that it has produced."<sup>83</sup> Toward the individual things, he said:

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<sup>78</sup> Ibid., pp. 119-120.

<sup>79</sup> Ibid., p. 120.

<sup>80</sup> Ibid., p. 121.

<sup>81</sup> Ibid., p. 124.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid.

. . . love or concern is the attitude we need. But toward the process that gives them life and enriches life another attitude is appropriate. To it we can commit ourselves. This commitment need not be hesitant, provisional, or tentative. It can and should be basic. If this process is what we mean by "nature" or "life," then we can and should view "nature" or "life" as sacred. But it will be better to speak of it as Creative Process or as God.

To commit ourselves to God, understood in this way, would be to seek to promote life in its variety and intensity as well as in its consciousness and love. It would encourage reflective inquiry and selective appraisal of the relation of means and ends. But it would also encourage sensitivity, passion, and community. It would provide a critical norm by which to evaluate the many claimants to loyalty and service. It would undergird our commitment to a healthy balance of human and subhuman life and would keep us sensitive to the total ecological consequences of our acts. It would encourage and even require just that extension of love<sup>84</sup> to the subhuman world that is the hallmark of the new Christianity.

#### Paul Folsom

Graduating from Loyola University, Chicago, in 1971, with a master's degree in religious education, Father Paul Folsom is currently the Director of Adult Education for the Diocese of St. Cloud.

While discussing the worsening ecology crisis, Father Folsom submitted that "Today's Christians . . . deserve some blame."<sup>85</sup> Here, the influence that Roman Catholic theology has had upon the development of the author's presuppositions became readily apparent. Despite the fundamental biblical affirmation of the goodness of creation, Christian thought has entertained false emphases. One such emphasis, according to Folsom, has been:

. . . an excessive other-worldliness--a tendency to see God as totally transcendent, or outside the world, and the consequent

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<sup>84</sup> Ibid., p. 125.

<sup>85</sup> Paul Folsom, And Thou Shalt Die in a Polluted Land, An Approach to Christian Ecology (Liquori: Liquorian Pamphlets & Books, 1971), p. 19.

assumption that Christianity is essentially concerned with man's fate in the next world rather than in this one.<sup>86</sup>

Another has been the ". . . rampant individualism that has characterized much of post-Reformation theology."<sup>87</sup> For many Christians, Folsom observed:

. . . salvation became simply a matter between the individual and God; it had no necessary connection with his relationship to other persons or to the world in which he finds himself.<sup>88</sup>

This type of thinking, Folsom believes, has aided in the process of disintegrating the universals into a meaningless mass of particulars. When man looks upon the earth now, he no longer sees it as a part of the Kingdom of God; it has become for him a vast conglomeration of things to be used according to his own discretion.<sup>89</sup>

With respect to the moral implications of the ecology crisis, the author mentioned three distinct ethical imperatives. Firstly, he said, "We must love God's creation."<sup>90</sup> In other words, "Our wonder must move us to love creation, because it reflects the divine."<sup>91</sup> Secondly, "We must be cocreators of nature."<sup>92</sup> That is, modern man must allow God to work through him to develop His creation and bring it to fruition.<sup>93</sup> Thirdly, Father Folsom implored the reader to ". . . exercise greater social responsibility."<sup>94</sup> He maintained that "Every Christian has to make ecological concern part of his love of neighbor."<sup>95</sup>

Finally, Father Folsom brought his presentation to bear upon the theological implications of ecology. His observations appeared in the form of three affirmative statements.

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<sup>86</sup> Ibid., p. 20.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid., pp. 21-23.

<sup>90</sup> Ibid., p. 32.

<sup>91</sup> Ibid., pp. 34-35.

<sup>92</sup> Ibid., p. 42.

<sup>93</sup> Ibid., pp. 42-43.

<sup>94</sup> Ibid., p. 46.

<sup>95</sup> Ibid.



From the outset, he asserted that "There is a balance between the sacred and the secular."<sup>96</sup> Noting the necessity of striking a proper balance between the sacred and the secular, Folsom stated:

Creatures surround us wherever we look. If we see them and their values in terms of their relationship to God, we will always and everywhere be reminded that this relationship is universal. In this we have a striking indication of the transcendence and immanence of God. God who created the world and therefore exists apart from it is at the same time present everywhere in the creatures He created.<sup>97</sup>

Next, he reinforced his belief in the fact that "Nature has a sacramental quality."<sup>98</sup> That is, nature has been symbolized as the embodiment of divine revelation and the working of God within the context of human life. Furthermore, he concluded:

It is clear that there is a sacramental quality about nature itself. The objects employed in the administration of the sacraments have become sacramentals by their ceremonial use. But Christ's selection of other objects of nature in His parables indicates that all nature has symbolic value in this sacramental sense. In fact, it might very well be true that nature itself is a sacrament to the People of God. If this be true, then there is every reason to speak of a Christian ecology.<sup>99</sup>

Lastly, the author testified that "Nature will be a part of the New Creation."<sup>100</sup> According to St. Paul's message in Romans 8:19-22, Christ has been expressed as the hope of salvation not only for man but also for nature. Folsom maintained that in the final consummation nature is to share in some way with the New Creation. Referring to Paul's great declaration, Folsom stated:

Christ is our hope and through us, He is the hope of all creation. Nature is not only valuable because it serves man's needs, but Christ is the promise that nature itself has value and meaning. Christ is the goal for which all of nature is intended. When we encourage men to conserve, to nurture, to positively build up nature, we are not only

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<sup>96</sup> Ibid., p. 62.

<sup>99</sup> Ibid., p. 75.

<sup>97</sup> Ibid., p. 69.

<sup>100</sup> Ibid., p. 78.

<sup>98</sup> Ibid., p. 74.

giving the value taught by ecology, but much more than this, we are preparing nature and ourselves for the New Creation. Christ is the guarantee that the work and creation of man will endure. The secular city of man is being redeemed. Whatever we do in partnership with nature--whether we build, undergo, suffer, or work through it--is not lost but completed and transformed by the Christ Event.<sup>101</sup>

### John W. Klotz

John W. Klotz, a Christian conservationist and environmentalist, has been Professor of Natural Science at Concordia Senior College in Fort Wayne, Indiana, since 1959.

Although Dr. Klotz, as a professional ecologist, spent most of his presentation carefully analyzing the nature and extent of the environmental crisis from the standpoint of science, his conclusions were decidedly theological. That is, as a Christian, he has come to the realization that man will only be able to learn how to use the resources God has provided as he discovers and assimilates those eco-theological principles which are only found in God's authoritative Word, the Bible.<sup>102</sup>

Reaffirming his faith in the authoritative Word, Professor Klotz denied that the environmental guidance he proposed could be found in either science or a compromising theology. Science, which lacks the standards God's Word provides, said Klotz, has:

. . . only one criterion for the good, and that is "Does it work?" Such a criterion leaves a great deal of room for the man who argues he can profit by exploiting the environment at the expense of others and future generations.<sup>103</sup>

The author also called attention to a weakness of many modern theologians. Speaking of their tendency to compromise with science,

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<sup>101</sup> Ibid., pp. 82-83.

<sup>102</sup> John W. Klotz, Ecology Crisis, God's Creation and Man's Pollution (St. Louis: Concordia Publishing House, 1971), pp. 157-158.

<sup>103</sup> Ibid., p. 159.

he stated:

. . . they are willing to bend theology and the Scriptures in whatever direction the winds of science seem to be blowing. Moreover, many of them have abandoned as hopelessly old-fashioned an authoritative Word; thus they have no firm basis on which to proclaim God's will.<sup>104</sup>

Answering Lynn White's thesis that Christianity has provided man with an ethic of exploitation, Dr. Klotz remarked:

White is probably correct in blaming the crisis on exploitation. He may even be right in blaming Christians for exploiting though they are certainly no guiltier than those who do not share their faith. But he is wrong in fixing the responsibility for encouraging this exploitation. Like so many other people he has forgotten to read beyond the first pages of the Bible. God's command to man to subdue the earth and to have dominion over the fish of the sea and the birds of the air and over every living thing that moves upon the earth can only be understood against the background of the Biblical concept of God's ownership of all earthly resources and man's position as a steward of what God has committed to him.<sup>105</sup>

The biblical guidelines necessary for the establishment of an orthodox theology of ecology were described according to their Godward and manward significances.

Firstly, Professor Klotz stressed the fact of God's ownership of everything. Accordingly, he said:

Man can hardly claim to own anything. Throughout Scripture God is pictured as the Creator: the land, the plants, the animals, the air, the water are His because He made them. Man stands in a creature relationship to God; all that he has comes from the God who created him, too. Thus man cannot claim to own anything. He hardly can claim the right to exploit.<sup>106</sup>

Furthermore, the author found that the Old Testament property laws incorporated within their statutes the recognition of Divine possession. He observed:

The Promised Land was given by God to His people; they possessed

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<sup>104</sup> Ibid.

<sup>105</sup> Ibid., pp. 160-161.

<sup>106</sup> Ibid., pp. 161-162.

it not as individuals but as a nation. The land was assigned to God's people by tribes, and care was taken to guarantee that the land would remain in the tribe. An individual might not transfer a title outside his tribe, Num. 36:5-9. Moreover, there was no such thing as selling the land; at best under the Jewish theocracy an individual could lease a piece of property, since in the year of jubilee it returned to its original owner, Lev. 25:13-17.<sup>107</sup>

Secondly, Dr. Klotz emphasized the manward aspects of those biblical principles necessary for environmental balance. He began by noting man's superiority and the resultant responsibilities. Man is indeed the foremost of the visible creatures; this is clear from scripture. Moreover, Klotz stated:

. . . he is to subdue the earth and have dominion over it; for this purpose God gave him a superior brain and set him apart from the animals by endowing him with the ability to communicate so that the culture and learning of the past can be transmitted to future generations.<sup>108</sup>

The concept of responsible stewardship in conjunction with man's superiority runs throughout the pages of scripture. As Professor Klotz rightfully stated:

Because man is the crown of God's creation and because he has been given great intellectual endowments, man has a special responsibility and is expected to care for what has been entrusted to him. He does not possess it; it has been given him to husband and tend, just as our first parents were to till the garden and keep it.<sup>109</sup>

The concept of Christian stewardship has also acted as a deterrent to the crass materialism of our day which has arisen as the result of people seeking to avoid the cost of environmental damage in order to pile up greater and greater profits. In contradistinction, Klotz remarked:

A Christian steward takes the long-range view of that which has been committed to his charge. He realizes that he cannot pile up

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<sup>107</sup> Ibid., p. 162.

<sup>108</sup> Ibid., p. 161.

<sup>109</sup> Ibid., p. 162.

short-time profits for his own benefit--at the expense of that which he will one day be obliged to turn over to his successors.<sup>110</sup>

### C. F. D. Moule

C. F. D. Moule, Lady Margaret's Professor of Divinity at Cambridge University since 1951, has written an excellent study of biblical ecology entitled, Man and Nature in the New Testament.

Professor Moule endeavored to show that the Bible ". . . regards it as man's duty to use nature, not to abstain from using it; but that he must use it as a son of God and in obedience to God's will. . . ." <sup>111</sup>

The author found that the primary meaning of man as created in the image of God is responsibility. And one of the clearest expressions of this interpretation of the image of God in man has been located in the apocryphal book, Ecclesiasticus, chapter seventeen. Quoting from it, Moule shared:

The Lord created man out of earth and turned him back to it again. He gave to men few days, a limited time, but granted them authority over the things upon the earth. He endowed them with strength like his own, and made them in his own image. He placed the fear of them in all living beings, and granted them dominion over beasts and birds.<sup>112</sup>

Man has been endued by God with the responsibility for ruling over the rest of creation on this planet. In the sense that man is responsible for ruling nature, Moule stated:

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<sup>110</sup> Ibid., p. 163.

<sup>111</sup> C. F. D. Moule, Man and Nature in the New Testament, Some Reflections on Biblical Ecology, Biblical Series, No. 17 (Philadelphia: Fortress Press, 1964), p. 2.

<sup>112</sup> Ecclesiasticus 17:1-4, R. S. V., cited by Moule, Man and Nature, p. 3.

• 113 he wears God's image. In a word, he is God's vice-gerent within creation: he is like a provincial ruler in an empire; he is supreme over nature, he is accountable to God alone. 114

Next, Dr. Moule sought to uncover the biblical basis of the nexus between man and nature. The story of the fall in Genesis 3:17-19, was interpreted as bearing witness to a sense of the connection between man's morals and nature's condition. Because of Adam's sin, the ground was cursed and henceforth defied his effort to obtain sustenance from it. 115

The nexus between man and nature was also shown in terms of man in Christ. The writer to the Hebrews affirmed that it is Christ alone who restores man to his true relationship to both God and nature. Referring to Hebrews 2:6-9, Moule quoted:

It has been testified somewhere, "what is man that thou art mindful of him, or the son of man, that thou carest for him? Thou didst make him for a little while lower than the angels, thou has crowned him with glory and honor, putting everything in subjection under his feet."

Now in putting everything in subjection to man, he left nothing outside his control. As it is, we do not yet see everything in subjection to him. But we see Jesus, who for a little while was made lower than the angels, crowned with glory and honor because of the suffering of death, so that by the grace of God he might taste death for every one. 116

According to Moule, the most remarkable statement in the whole New Testament concerning the relation of man to nature has occurred in Romans chapter eight. Paraphrasing Romans 8:20-21, Professor Moule stated:

For creation was subjected to frustration, not by its own choice but because of Adam's sin which pulled down nature with it, since God had created Adam to be in close connection with nature. But the

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<sup>113</sup>"Vice-gerent," (not "vice-regent") an official deputed by a superior, such as a king, to exercise his powers; thus, a vicar, or manager, with delegated power. Ibid.

<sup>114</sup>Ibid.

<sup>115</sup>Ibid., pp. 5-6.

<sup>116</sup>Ibid., p. 8.

disaster was not unattended by hope--the hope that nature, too, with man, will be released from its servitude to decay, into the glorious freedom, which characterizes man when he is a true and obedient son of God.<sup>117</sup>

All this means, Moule said, is "that man is responsible before God for nature."<sup>118</sup> That is, as long as man has refused to play the part assigned to him by God, the world of nature has continued in a dislocated and frustrated state. Dr. Moule concluded that it must be along the lines of Romans eight that the ethical problems presented by man's power over nature are to be solved. Reflecting, he said:

Man is placed in the world by God to be its lord. He is meant to have dominion over it and to use it and use it up--but only for God's sake, only like Adam in paradise, cultivating it for the Lord. As soon as he begins to use it selfishly, and reaches out to take the fruit which is forbidden by the Lord, instantly the ecological balance is upset and nature begins to groan.<sup>119</sup>

#### David F. K. Steindl-Rast

David F. K. Steindl-Rast, a monk at the Benedictine monastery of Mount Saviour, near Elmira, New York, was born and educated in Vienna, Austria. Brother David holds the Ph.D., has lectured and published widely, and is especially concerned with the role of monks as bridge builders between East and West.<sup>120</sup>

As a Benedictine monk familiar with Eastern monasticism, Brother David posited seven "insights," as he called them, which could serve to bring the East and West together, theologically, against their common foe, the ecological crisis.

First, he stated simply that "East and West meet in the monastic

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<sup>117</sup> Ibid., p. 10.

<sup>118</sup> Ibid. <sup>119</sup> Ibid., p. 14.

<sup>120</sup> Richard E. Sherrell (ed.), Ecology: Crisis and New Vision (Richmond: John Knox Press, 1971), p. 12.

experience."<sup>121</sup> By the monastic experience, Steindl-Rast meant:

. . . the expanding of a basic human dimension: the exploration of inner space. The seed for this quest lies in those moments of sudden awareness which all of us know. The monk devotes his whole life to the intense cultivation of this seed. Monastic life is a life-style centered in the peak experience.<sup>122</sup>

Second, the core of this peak experience, as Brother David called it, is the realization that there are no gaps. Concerning this peak experience, he said, "one finds oneself one with oneself and one with all there is. There are no gaps."<sup>123</sup> Relating this realization to the reader as the goal of monastic training, the author stated:

To be struck by the fact that there are no gaps and to apply this insight radically to every area of daily life leads to what one might call the monastic life-style, and this is one way of living a truly human life. At the point where the monk catches a glimpse of his goal, what lies at the very core of each religion reveals itself in a flash, because the goal in every case is ultimate Oneness.<sup>124</sup>

Third, Steindl-Rast observed that "the Christian message is opposed to the very thought structure through which it is transmitted."<sup>125</sup> This means, he said:

One ought to show . . . that there exists an opposition between the body-soul dichotomy of Western thought and the body-soul unity in Judeo-Christian anthropology. Likewise the dichotomy of matter/spirit, sacred/profane, natural/super-natural, and similar polarizations is overcome by the very message of Christianity, while it remains indispensable for Western thought-structure. But, paradoxically, it is in this thought structure that the Christian message is being confined like the living egg within its lifeless shell.<sup>126</sup>

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<sup>121</sup>David F. K. Steindl-Rast, "What Can Theology Contribute to an Ecological Solution?" Ecology: Crisis and New Vision, ed. Richard E. Sherrell (Richmond: John Knox Press, 1971), p. 126.

<sup>122</sup>Ibid.      <sup>123</sup>Ibid., pp. 126-127.

<sup>124</sup>Ibid., p. 127.      <sup>125</sup>Ibid., p. 128.

<sup>126</sup>Ibid.



Fourth, he submitted that "no Judeo-Christian belief, but its Western frame of reference constitutes an ecological hazard."<sup>127</sup> That is, fragmented thinking, or "gap-thinking" as the author called it, has set man over against his environment so that it has become the root of the ecological crisis. The Judeo-Christian religion is not culpable for man's current environmental crisis.

Fifth, Dr. Steindl-Rast postulated that "the Christian experience is rapidly getting detached from an exclusive Western frame of reference."<sup>128</sup> He based this insight upon the following observation:

Somewhere in the past we must have started out by confusing religion and morality, man's search for meaningful life and the norms of meaningful living. From there on it was all too easy to allow religion to be swallowed up by ethics. In the end, organized religion at its worst no longer offered religious experience; it merely preached morality. Today people flock to where religious experience is made possible. They know once more what they want, and they will not settle for less.<sup>129</sup>

Sixth, as rules have succeeded in changing outward behavior alone, only awareness will change the inner-life; that is, Steindl-Rast remarked, "The core of the religious experience is unlimited mindfulness."<sup>130</sup> By unlimited mindfulness, he meant:

. . . the attitude by which we grasp things and situations. In unlimited mindfulness, we allow things and situations to take hold of us. The typical gestures corresponding to these two attitudes are the clenched fist grasping only so much and the open hand, ready to receive without limit. The basic religious gesture is the gesture of the open hand.<sup>131</sup>

Finally, Steindl-Rast said, "The real contribution of religions to ecology lies not in preaching ethics but in leading to the religious experience."<sup>132</sup> He held that the authentic religious experience results in

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<sup>127</sup> Ibid.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid., p. 129.

<sup>131</sup> Ibid.

<sup>132</sup> Ibid., p. 130.

mindfulness, awareness, and reverence. Not to be truly present or fully aware in an experiential sense is a condition caused by hanging on to the past through greed, being ahead of oneself through impatience, or being indolent. Connecting the present ecological crisis with these vices he said:

Where resources are limited, greed prevents sharing. Rashness prevents planning. Indolence stifles caring and fosters idleness in the face of exploitation. If it is true that caring, planning, and sharing spring from mindfulness, and that these three are the key to any ecological solution because ecology begins not with programs but with persons . . . , then, the key to changing persons lies within the religious experience.<sup>133</sup>

### Francis A. Schaeffer

Dr. Francis Schaeffer, Director of L'Abri Fellowship in Huemoz, Switzerland, has written an excellent book, Pollution and the Death of Man, in which he defended the Christian view of ecology.

Dr. Schaeffer has declared that because of the Fall man has experienced divisions in his primary relationships. That is, as a result of his willful sin, man has divided himself from God, from himself, from other men, and from nature.<sup>134</sup> Consequently, man out of touch with God has no adequate basis upon which to determine his rightful relationship with nature, nor has he any reason for searching the biblical principles of dominion or stewardship in order to ascertain the nature of his responsibilities. The orthodox, evangelical Christian view of the ecological crisis, of which Schaeffer is an advocate, then, has held firmly to the belief that the cause of the ecological crisis is sin and that its only answer lies in the salvation of men through Jesus Christ.

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<sup>133</sup> Ibid.

<sup>134</sup> Francis A. Schaeffer, Pollution and the Death of Man, The Christian View of Ecology (Wheaton: Tyndale House Publishers, 1970), p. 68.

Schaeffer began his presentation with a look at pantheism as a possible alternative view for ecologically disturbed man. Noting the growing popularity behind pantheism as the only answer to ecological problems, and the West's increasing interest in Eastern thinking,<sup>135</sup> Schaeffer unequivocally stated that "pantheism in any form does not give a sufficient answer."<sup>136</sup> He then proceeded to document his statement upon the basis of two philosophical observations. First of all, he said:

Pantheism . . . gives no meaning to any particulars. In true pantheism, unity has meaning, but the particulars have no meaning, including the particular of man. Also, if the particulars have no meaning, then nature has no meaning, including the particular of man. A meaning to particulars does not exist philosophically in any pantheistic system, whether it is the pantheism of the East or the "Pan-everything-ism" of beginning only with the energy particles, in the modern West. In both cases, eventually the particulars have no meaning. One is left only with Jean-Paul Sartre's absurd universe. Pantheism gives you an answer for unity, but it gives no meaning to the diversity. Pantheism is not an answer.<sup>137</sup>

Secondly, he referred to the tendency of pantheism to bring "man to an impersonal and low place rather than elevating him."<sup>138</sup> Furthermore, he said, this inclination:

. . . is an absolute rule. Whether the pantheistic answer is the modern scientism related back to the energy particle, or whether it is Eastern, eventually nature does not become high but man becomes low.<sup>139</sup>

Reviewing other inadequate answers, Dr. Schaeffer remarked that just as pantheism is no answer for a proper view of nature, so "one must understand that just any kind of Christianity is no answer either . . ."<sup>140</sup> In addition, he stated, "that Christianity does not automatically have an

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<sup>135</sup> Ibid., p. 23.

<sup>136</sup> Ibid., p. 30.

<sup>137</sup> Ibid.

<sup>138</sup> Ibid., p. 32.

<sup>139</sup> Ibid.

<sup>140</sup> Ibid., p. 38.

answer; it has to be the right kind of Christianity."<sup>141</sup> Any Christianity, he said:

. . . that rests upon a dichotomy--some sort of platonic concept--simply does not have an answer to nature. . . . In such a Christianity there is a strong tendency to see nothing in nature beyond its use as one of the classic proofs of God's existence.<sup>142</sup>

In defense of the biblical view of nature, Schaeffer analyzed it into its relevant parts and interpreted their significance. First of all, he emphasized that God created ex nihilo. That is, he said, "God created everything out of nothing. From this, we must understand that creation is not an extension of the essence of God. Created things have an existence in themselves."<sup>143</sup> In this Schaeffer underscored the reality of the created order and implied that nature has value in itself because God made it.

Secondly, Schaeffer explicated the meaning of man as created in the imago Dei. Because God has created man in His own image, the author explained:

. . . man's relationship is upward rather than downward. . . . Man is separated, as personal, from nature because he is made in the image of God. That is, he has personality and as such he is unique in the creation, but he is united to all other creatures as being created.

Man is made in the image of God, who is personal; thus he has two relationships--upward and downward.<sup>144</sup>

Thirdly, the Christian has been called upon to recognize the double nature of his humanity. From the biblical viewpoint, Schaeffer stated:

. . . there are two humanities: one, the humanity that stands in revolt against God, and the other, the humanity that used to be in revolt against God (because none of us came into this second humanity by natural birth).<sup>145</sup>

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<sup>141</sup> Ibid., p. 40.

<sup>142</sup> Ibid.

<sup>143</sup> Ibid., p. 47.

<sup>144</sup> Ibid., p. 50.

<sup>145</sup> Ibid., p. 52.

Yet at the same time, Dr. Schaeffer cautioned:

. . . there is only one humanity, and this is no paradox. There are two--but one: the Christian is called to understand that there are two humanities, and to love his brothers in Christ especially. . . .<sup>146</sup>

Relating the two humanities of man in his relationship to nature, the author said:

One must not choose; one must say both. I am separated from it because I am made in the image of God; my integration point is upward, not downward; it is not turned back upon creation. Yet at the same time I am united to it because nature and man are both created by God.<sup>147</sup>

Fourthly, Schaeffer reasoned that the material world is not without meaning because of Christ's incarnation and resurrection.<sup>148</sup> Commenting, he said:

How can it be? After all, Jesus took on a real body because God had made man with a body. So, in the incarnation, the God of creation took on a human body. More than that, after the resurrection Jesus Christ could eat and be touched. The Bible insists on the real, historic, space-time resurrection of Jesus, so that there was a resurrected body that could eat and that could be touched.<sup>149</sup>

The author stressed that the bifurcated relationship between man and nature could only be restored if there was a proper emphasis upon creation and "a fresh understanding of man's "dominion" over nature (Genesis 1:28)."<sup>150</sup> Referring to the nature of man's "dominion" and his obligation as a steward, Schaeffer said:

When we have dominion over nature, it is not ours, either. It belongs to God, and we are to exercise our dominion over these things not as though entitled to exploit them, but as things borrowed or held in trust, which we are to use realizing that they are not ours intrinsically. Man's dominion is under God's Dominion and under God's Domain.<sup>151</sup>

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<sup>146</sup> Ibid.      <sup>147</sup> Ibid., p. 53.

<sup>148</sup> Ibid., pp. 55-60.      <sup>149</sup> Ibid., p. 60.

<sup>150</sup> Ibid., p. 69.      <sup>151</sup> Ibid., p. 70.

Speaking of the mission of the Christian Church with respect to the whole question of ecology, the author outlined its calling:

The Church ought to be a "pilot plant," where men can see in our congregations and missions a substantial healing of all the divisions, the alienations, man's rebellion has produced.

So the Christian Church ought to be this "pilot plant," through individual attitudes and the Christian community's attitude, to exhibit that in this present life man can exercise dominion over nature without being destructive.<sup>152</sup>

### SUMMARY

In spite of its immaturity, in just a few short years, the eco-theology movement has fathered a surprising amount of literature. Although there are definitely, at the present, more popular periodical and religious journal articles dealing with all aspects of the theological significance of ecology than there are books dealing with the same, it has been encouraging to note that books emerging on the subject are endeavoring to treat the problem in its entirety.

The foregoing analysis was an attempt on the part of this writer to objectively observe the categories and content of the books emanating from the current thrust of theology to understand man's divinely ordained relationship with nature.

The first division concerned those writers who have laid the blame for the ecology crisis on something other than man himself. McHarg and White argued that Christianity was to blame for man's exploitative attitudes toward nature. Dorothy and Gerald Slusser maintained that technology, the by-product of man's ingenuity, was the culpable cause of man's environmental catastrophe.

The third area of the presentation concentrated upon that part of a

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<sup>152</sup> Ibid., p. 82.

developing eco-theology concerned with man's relation to the "things" of the created order. Frederick Elder viewed the problem of man in relation to nature from the perspective of two theological polarities; viz., inclusionism and exclusionism. According to Elder, the inclusionists have tended to include man in the realm of nature, while the exclusionists have tended to bifurcate man from nature. Paul Santmire characterized the division between man and nature as "the ecological schizophrenia of the American mind."

The fourth section, dealing with eco-theology, endeavored to express the nature and content of the contributions of seven writers to a theological basis for man's environmental responsibilities. Henlee Barnette introduced the creation, incarnation, covenant relationship, eschatology, and anthropology, as necessary components for a developing eco-theology. John Cobb was convinced that the only answer laid in the establishment of a "new Christianity" based upon a commitment to the process of healing and growth. Paul Folsom emphasized environmental stewardship grounded upon the fact that nature has a sacramental quality. From more of a scientific orientation, John Klotz concluded that the ultimate answer to man's environmental dilemma will be a spiritual one based upon God's authoritative Word. C. F. D. Moule very ably outlined the biblical basis of man's relationship with nature. David Steindl-Rast advocated the view that the religious experience has emerged as the key contributor to ecological understanding. Finally, Francis Schaeffer defended the Christian view of ecology against pantheism and dichotomous Christianity.

The following chapter, "Towards the Development of a Theology of Ecology," has been constructed, on the part of this writer, as an attempt to introduce the reader to suggested areas for further study which, potentially, could be a part of a yet fuller accounting of the theology of ecology.

## Chapter 5

### TOWARDS THE DEVELOPMENT OF A THEOLOGY OF ECOLOGY

The contemporary eco-theology movement has emerged, for the most part, as a reaction to the mounting ecological crisis. Ecologists and other biological scientists have been telling man, for some time, that his survival depends on immediate and global control of the problems of pollution and overpopulation. But, the church made no widespread attempt to communicate the biblical basis of environmental stewardship until Lynn White, Jr., in his paper, "The Historical Roots of Our Ecologic Crisis," accused Christianity of fostering exploitative attitudes in man toward nature. Consequently, the eco-theological literature which began to surface almost immediately following White's notorious accusation was, primarily, a defensive reaction against his disturbing thesis. More recently, however, Christian writers from a variety of disciplines have endeavored to broaden the base of man's understanding of his ecological responsibilities according to well-founded biblical and doctrinal motifs. Books such as Francis Schaeffer's, Pollution and the Death of Man, and Henlee Barnette's, The Church and the Ecological Crisis, are indicative of the seriousness of this new mood which is intent upon communicating the fullness of the Christian view of nature. But, the work must continue so that the biblical doctrines of nature, man, and God might be clearly enunciated in all their complexities and interrelationships.

This paper was intended, basically, to serve as an analytical instrument; i.e., to separate the several voices of current eco-theological literature into their various constituent parts in order to determine exactly what was being said. Although no attempt was made on the part of this writer to propose an extensive or systematic ecological theology, a



number of areas arose during the course of this investigation which seemed important enough to merit further study.

Therefore, this chapter has been undertaken to present to the reader suggestions for further study and the relevant theological readings where their more formal discussion can be found.

Firstly, a more thorough biblical study of the meanings of "subdue" and "dominion" needs to be made. What did God mean when He said, "'Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth"'? <sup>1</sup> What is the relation between man in God's image and the biblical concept of dominion? Are there any historical examples of men or nations who tenaciously held to these principles?

1. George H. Livingston, Professor of the Old Testament at Asbury Theological Seminary, has developed a short but effective study of the significance of subdue and dominion in his commentary on Genesis. <sup>2</sup>

2. Johannes Pedersen, in his momentous work, Israel, Its Life and Culture, delved into the Israelites' concept of man's relation to the earth and his relation to the animals which are in the world. <sup>3</sup>

Secondly, a fuller biblical study of man in his relationship to the image of God must be undertaken in order to more completely understand man's divinely ordained environmental privileges and responsibilities. What relationship does the Adamic Fall have to the imago Dei? What is

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<sup>1</sup>Genesis 1:28.

<sup>2</sup>George Herbert Livingston, Genesis, eds. A. F. Harper, Ralph Earle, et al., Beacon Bible Commentary, Vol. I (Kansas City: Beacon Hill Press of Kansas City, 1969), pp. 35-36.

<sup>3</sup>Johannes Pedersen, Israel, Its Life and Culture, I (London: Oxford University Press, 1926), 453-496.

the relation between man as created in the image of God and his position as king over the earth? What is the effect of man's image upon his relation to nature?

1. From a definite reformed position, G. C. Berkouwer, Professor of Systematic Theology at the Free University of Amsterdam, has written a classic study of the meaning of the divine image in man.<sup>4</sup>

2. David Cairns has made an excellent study of the image of God in man according to Old Testament and New Testament teachings.<sup>5</sup>

3. Walther Eichrodt has maintained that man created in the image of God is, by virtue of his relation to God, set apart from nature.<sup>6</sup>

4. A study of man as over nature and yet under God in relation to the divine image was made by Harold Lynn Hough.<sup>7</sup>

5. The Greek word for image, εἰκών (ēkōn), and its application in the Old and New Testaments has been thoroughly investigated by Gerhard Kittel.<sup>8</sup>

6. Commenting on Genesis 1:29, and man's privilege of use, George H. Livingston said, "God granted to man the right to use the fruits of plant life for food."<sup>9</sup> This, however, did not give him the privilege to

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<sup>4</sup>G. C. Berkouwer, Man: The Image of God (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1962), pp. 67-233.

<sup>5</sup>David Cairns, The Image of God in Man (London: S. C. M. Press, Ltd., 1953), pp. 7-52.

<sup>6</sup>Walther Eichrodt, Man in the Old Testament, (trans.) K. and R. Gregor Smith (Chicago: Alec R. Allenson Inc., 1951), pp. 30 ff. .

<sup>7</sup>Lynn Harold Hough, The Dignity of Man (New York: Abingdon--Cokesbury Press, 1950), pp. 7-18.

<sup>8</sup>Gerhard Kittel (ed.), Theological Dictionary of the New Testament, II (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1964), 388-397.

<sup>9</sup>Livingston, op. cit., p. 36.

exploit nature, leaving behind waste and desolation. Part of being created in the image of God, according to Livingston, entailed cultivation and the conservation of natural resources.

7. In his book, The Christian View of Man, J. Gresham Machen discussed the spiritual significance of the divine image in chapter twelve, "God's Image of Man."<sup>10</sup>

8. Erich Sauer described the real essence of the image of God in man as lying much deeper than the level of the physical body. He said:

The body is only the instrument through which the spiritual manifests itself. It is the spirit that is decisive. Man's body reflects something of the image of God only because the body is the home of man's spirit, and because the spirit which lives in the human body was created in the image of God. Man's body derives its nobility from the nobility of the human spirit, and the nobility of the spirit is rooted in God in virtue of its creation and divine purpose.

Thus the essence of the image of God in man lies in the spiritual and the moral. It is based on the nature of his inner life, on the real substance of his spiritual personality.<sup>11</sup>

9. Discussing the importance of being created in the image of God for twentieth-century man, Francis Schaeffer observed that it has served to differentiate man from the rest of the universe, substantiate the validity of human personality and fellowship, and confirm the reality of divine revelation.<sup>12</sup>

10. In relating the Adamic Fall to the image of God in man, Mildred Bangs Wynkoop supported her thesis that man did not lose the image in the

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<sup>10</sup> J. Gresham Machen, The Christian View of Man (Grand Rapids: Wm. B. Eerdmans Publishing Co., 1947), pp. 159-173.

<sup>11</sup> Erich Sauer, The King of the Earth, The Nobility of Man According to the Bible and Science (Grand Rapids: Wm. B. Eerdmans Publishing Company, 1962), p. 140.

<sup>12</sup> Francis Schaeffer, Genesis in Space and Time (Downers Grove: Inter-Varsity Press, 1972), pp. 46-52.

Fall for he is still responsible to God through conscience and the law.<sup>13</sup>

Thirdly, a study of the reasons for man's environmental destructiveness would be extremely valuable for evangelical Christian theology in meeting the spiritual needs of contemporary humanity.

1. In a letter of personal correspondence written to this writer, Dr. Richard A. Baer, Jr. stated:

. . . as recently as two years ago I was still concentrating mainly on developing a philosophy of nature, more and more I am focussing my attention on what it is in man that causes him to exploit his environment as he does. My conviction is that the healing of nature will come about only with the healing of man. In this study I have found some of the classical work of Reinhold Niebuhr, Paul Tillich, and others most helpful. Niebuhr's The Nature and Destiny of Man still remains one of the finest sources for theological reflection of this type.<sup>14</sup>

2. Reinhold Niebuhr pointed to the pride of power prompted by the sense of insecurity as one of the sins which has brought man to the brink of environmental catastrophe. Sometimes, he said:

. . . this lust for power expresses itself in terms of man's conquest of nature, in which the legitimate freedom and mastery of man in the world of nature is corrupted into a mere exploitation of nature. Man's sense of dependence upon nature and his reverent gratitude toward the miracle of nature's perennial abundance is destroyed by his arrogant sense of independence and his greedy effort to overcome the insecurity of nature's rhythms and seasons by garnering her stores with excessive zeal and beyond natural requirements. Greed is in short the expression of man's inordinate ambition to hide his insecurity in nature.<sup>15</sup>

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<sup>13</sup> Mildred Bangs Wynkoop, "A Biblical Study of Man in His Relationship to the Image of God" (unpublished Bachelor of Divinity thesis, Western Evangelical Seminary, Portland, Oregon, 1952), pp. 47 ff. .

<sup>14</sup> Based on personal correspondence between Dr. Richard A. Baer, Jr., Associate Professor of Philosophy and Religion at the Earlham School of Religion, and the writer.

<sup>15</sup> Reinhold Niebuhr, Human Nature, Vol. I, The Nature and Destiny of Man (New York: Charles Scribners Sons, 1943), pp. 190-191.

3. Francis Schaeffer has pointed to man's disobedience in turning away from God as the central cause of his problems. In his book, Death in the City, Schaeffer questioned:

What caused such a breakdown in our culture? The two world wars? Don't believe it. If the house had been strong, it would not have come down with the earthquake. If the heart had not been eaten out of the culture, the world wars would not have broken it. "Don't worry," some say, "it's only a technological problem, and technology will be a solution." But that is not true. Man would not be in the position he is in simply because of technological problems if he had had a really Christian base. A population explosion? Of course it is serious, but it is not the heart of the problem. The fact that the United States is now urban rather than agrarian? Is this the final problem? No. To solve only the urban problem is to heal "slightly." You can hear it over and over again--all kinds of secondary solutions to secondary problems. Of course these are problems, but they are not the central problem. And men who use theological language to fasten our eyes upon them as the central problem stand under the judgment of God, because they have forgotten that the real reason we are in such a mess is that we have turned away from the God who is there and the truth which He has revealed. The problem is that the house is so rotten that even smaller earthquakes shake it to the core.<sup>16</sup>

Fourthly, a study of the doctrine of creation, especially the significance of God's creating ex nihilo, could be a tremendous help towards understanding the independent existence of created things.

Commenting on the meaning of one's concept of creation, Francis Schaeffer observed:

The beginning of the Christian view of nature is the concept of creation: that God was there before the beginning and God created everything out of nothing. From this, we must understand that creation is not an extension of the essence of God. Created things have an existence in themselves. They are really there.<sup>17</sup>

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<sup>16</sup> Francis Schaeffer, Death in the City (Downers Grove: InterVarsity Press, 1969), p. 58.

<sup>17</sup> Francis Schaeffer, Pollution and the Death of Man, The Christian View of Ecology (Wheaton: Tyndale House Publishers, 1970), p. 47

Fifthly, a study of various philosophical considerations could lead to a deeper understanding of man's place of responsibility in an ecologically troubled world.

1. Emphasizing that desire for outer change is largely ineffectual unless inner development is first undertaken, Elton Trueblood remarked:

We shall never have a better world until there are better persons in it. No amount of economic or social planning, however important that may be, will ever succeed unless the plans are implemented by people with the right spirit. Every production of any value begins within, though it does not end there. The best social system we can imagine is bound to fail unless the persons who participate in it are not only compassionate, but also self-disciplined and truly humble. In the words of William Penn, we must be changed men ourselves before we set out to change others. And we cannot be changed in the right direction without the cultivation of reverence.<sup>18</sup>

2. Elton Trueblood, in his momentous book, Philosophy of Religion, concluded his discussion of freedom by stating that man's freedom is only derivative. That is, he said:

We are driven to the conclusion that freedom is ultimately meaningful only in the light of the being and nature of God. We are free only because our freedom is derivative. To say that man is made in God's image is to say that, while God is fully free, we are partly or intermittently free. Though man is made in God's image, the difference between human and divine freedom is tremendous. The crucial difference is revealed in the observation that man makes nothing that is free. Man makes machines, but they are mere instruments at best. The marvelous computation devices of which modern society is justly proud have no thoughts of their own and make no decisions. They merely give men materials for more intelligent decisions. The omnipotence of God is shown in the fact that He alone has made free beings.<sup>19</sup>

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<sup>18</sup> Elton Trueblood, The New Man for Our Time (New York: Harper & Row, Publishers, 1970), pp. 59-60.

<sup>19</sup> Elton Trueblood, Philosophy of Religion (New York: Harper & Brothers Publishers, 1957), p. 290.

Sixthly, a study of the relation between the current ecological crisis and the events of eschatology could lend itself to a deeper understanding of the relation between the redemption of man and the restoration of nature.

In his commentary on the book of Romans, Wilber T. Dayton observed, in relation to chapter eight:

Though redemption is already completed on a spiritual level, it is obviously not yet so on the physical and environmental level. For from the act of subjecting nature to vanity right up to the present time the whole creation groaneth and travaileth in pain. . . . Nature was made for greater glory and is, as it were, desperately impatient for its restoration. Of this we can be sure. Nature will be emancipated. When man's redemption is complete he will find himself in a new world matching his new creation.<sup>20</sup>

Lastly, a study of the biblical theology of stewardship in relation to man's care and treatment of the earth and its creatures would help to uncover the fact that only God is the Sovereign Lord, and the lower creatures are to be used with this truth in mind. Man is not using his own possessions.

1. Speaking of responsible trusteeship as the basic thought of stewardship, Dr. Kantonen, Professor of Systematic Theology at Hamma Divinity School, stated:

We are neither the lords of creation nor slaves of "the elemental spirits of the universe" but stewards to whom the Creator and Owner of all things has entrusted what belongs to him for the realization of his purpose with regard to it. He commits to us the whole world of nature saying, "Fill the earth and subdue it; and have dominion . . . over every living thing that moves upon the earth." But one to whom has been entrusted the property of another is accountable to the owner.

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<sup>20</sup> Wilber T. Dayton, Romans and Galatians, ed. Charles W. Carter, The Wesleyan Bible Commentary, Vol. V (Grand Rapids: William B. Eerdmans Publishing Company, 1965), p. 56.

Human existence is thus responsible existence. "To who much is given, of him will much be required."<sup>21</sup>

2. Milo Kauffman, former President of Hesston College, wrote in his book, The Challenge of Christian Stewardship, that man was created as a steward of the soil. Christian stewardship, he said:

. . . recognizes that man does not own the land. "The earth is the Lord's, and the fulness thereof." The land has been entrusted to man. He is the steward, a partner with God in its development and use. The earth is covered with but a few inches of soil. Upon this thin layer of soil the people of the earth are dependent for their food. The fate of this and succeeding generations depends much upon how this thin layer is tilled and cared for. As stewards of God we are morally obligated to dress and keep the ground so that its fertility and productivity are passed on to future generations.<sup>22</sup>

3. Stressing God's ownership of the earth in his book, Handbook of Stewardship Procedures, T. K. Thompson explained:

The Bible teaches a radical doctrine of property. God alone is the ultimate owner. Men, tribes, and families have only a responsible usership. "The earth is the Lord's and the fulness thereof, the world and those who dwell therein" (Psalm 24:1). All men know that they must leave this earth and their property must pass on to others. At the same time most men act as if they were going to live forever. Louis XI of France was a devout king. He gave the entire province of Boulogne to the Virgin Mary. All that he reserved for himself were the revenues therefrom! Men say they believe that the earth is the Lord's but they want to get as much of it for themselves as they can--at least the income therefrom.<sup>23</sup>

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<sup>21</sup>T. A. Kantonen, A Theology for Christian Stewardship (Philadelphia: Muhlenberg Press, 1956), p. 35.

<sup>22</sup>Milo Kauffman, The Challenge of Christian Stewardship (Scottsdale, Pennsylvania: Herald Press, 1955), p. 56.

<sup>23</sup>T. K. Thompson, Handbook of Stewardship Procedures (Englewood Cliffs: Prentice-Hall, Inc., 1964), p. 4.



## Chapter 6

### SUMMARY AND CONCLUSIONS

This chapter has been written as an endeavor on the part of this writer to adequately summarize the findings of this study and to give a comprehensive record of the resulting conclusions.

The ravages of pollution and environmental misuse are not new scientific or social phenomena, by any means. Since man fell from his pristine state of Adamic innocence, he has willfully chosen to disregard the divine imperatives regarding his responsibilities as a steward of the earth and its creatures. As a result of his disobedience, man has begun to reap the consequences of his exploitative acts and the prospects are, indeed, quite frightening. Scientists are now saying that there is no place on earth where the effects of man's ecological irresponsibility have not grossly affected the crucial balance between organism and environment.

As of late, a tremendous amount of research has been taking place in an effort to determine the nature of the causes behind the effects of the ecological crisis. It is becoming more apparent, through increasing scientific, social, and religious documentation, that man will not be able to solve the ecological crisis simply by developing better technological know-how. The basic problem is not technology but spirituality. Man's sinfulness has divided himself from God, from other men, from his own self, and from nature. Man apart from God, his divine image ignored and soiled by sin, has abused nature as a means to his own selfish ends.

Realizing the deeply religious and spiritual ramifications of the environmental crisis, the church has been attempting to enunciate its position in support of environmental stewardship. Over the past several years, the offerings in the field of religious literature dealing with the

varied aspects of the ecology crisis have grown tremendously. With an eye to the emerging field of eco-theology, the writer analyzed a representative cross section of available religious literature, both periodicals and books, in an effort to ascertain the nature of its component parts.

The research methodology employed to produce this paper incorporated two investigative procedures. Firstly, all available eco-theological literature was treated deductively in order to determine the qualitative and quantitative aspects of its composition. In other words, this writer wanted to find out who was contributing to the literature, and what was being written about it. Secondly, working inductively, the writer labored with the pieces, carefully fitting them back together, until larger areas of thought became apparent and finally coalesced. The table of contents represents a synoptic view of the results of this second step of the research methodology. The body of the paper resulted as this basic outline was "fleshed-out."

This writer found, as a consequence of his research, that man is at the center of the ecological crisis as both the offender and the offended. The population explosion has tended to increase the proximity between man and his pollutive practices. That is, he can no longer engage in environmentally abusive activities and expect to live on without experiencing the consequences of his acts. The harnessing of radioactivity and the widespread use of pesticides and fertilizers have again pointed to the criticalness of interrelationships within our ecosystem. Man's technology has turned on him, and its by-products (e.g., air, water, thermal, and noise pollution) are damaging: the aesthetic values of his environment, the genetic and somatic balance of his health, and the potentiality of life in all its fulness for his posterity.

A careful examination and analysis of the ever broadening horizon of religious periodical literature centering on the theological significance of the ecology crisis, yielded three divisions; viz., ecological ethics,

ecological theology, and ecological bibliography.

Ethically speaking, man, as the responsible party, will have to rethink the rationale underlying his relation to all creatures and things, the organic as well as the inorganic. Evangelical Christian ethicists have held that the proper base for an eco-ethic can only be found by recovering biblical themes (e.g., love and stewardship) which have been neglected. The church has been called upon to demythologize those contemporary cultural values, such as America's fascination with the gross national product as a measure of national achievement, which prevent man from relating more intelligently to his natural environment.

The thrust of the available religious periodical literature upon the developing eco-theology has converged on man's relationship with nature. Writers have been urging man to demonstrate a new commitment to the finite things of the created order, realizing that what damages life in any form tends also to damage man. The biblical concept of "man over nature" as evidenced in the message of Genesis 1:28, has been shown to be, not a pretext for the indiscriminate use of nature, but rather a divine command to order, maintain, protect, and care for nature. The ethical demands of this text have best been cast in the biblically defined role of the steward. The environmental steward has been envisioned as the man who holds his environment in trust, under God.

The available eco-bibliographical surveys and lists have served to underscore the extensive nature of the ecological crisis and its ethical and theological implications. The two bibliographical lists which have been appended to this paper are prime examples of extensive bibliographies covering both secular and theological literature which could shed light upon the development of a Christian approach to the ecology crisis.

Books dealing with the theology of ecology have ranged in their treatment of the subject from those which have accused Christianity of causing the ecology crisis to those which affirmed it as the only alternative

for ecologically disturbed man.

Blame for the ecological crisis was laid upon Christianity, as some insisted, because of the arrogance towards nature it has supposedly engendered in man as a result of the Genesis account of creation. On the contrary, Christian ethicists have reinforced the essential value of creation by emphasizing that the material creation is good and that it reflects the glory of God. They have maintained, and rightly so, that the message of the biblical account of creation is not license for abusive attitudes, on man's part, toward nature. Man is at once both a part of the created order and a regent established by God to have dominion over it. For those who affirmed the biblical view of man's relation to nature, all other alternatives were held to be spurious and grossly incomplete.

On the basis of the evangelical theological view of man and nature, man has been viewed as possessing a dual orientation; i.e., man is related upward to God as a creature formed in the divine image and downward to nature because God created them both. Only as man becomes spiritually related to God, can his privileges and responsibilities as a steward under God and over nature be brought into their proper perspective.

Emerging primarily as a reaction to the disturbing thesis that Christianity is the cause of the ecology crisis, the contemporary eco-theology movement has been striving to broaden the base of man's understanding of his ecological responsibilities according to well-founded biblical and doctrinal motifs. But, the work must continue so that the biblical doctrines of nature, man, and God might be clearly enunciated in all their complexities and interrelationships. Consequently, the following areas were suggested for further study in view of their potential eco-theological significances:

1. The biblical meanings of "subdue" and "dominion."
2. Man in his relationship to the image of God.
3. The reasons for man's environmental destructiveness.

4. The biblical doctrine of creation.

5. The various philosophical considerations, e.g., man's freedom and his moral/ethical responsibilities.

6. The relation between the redemption of man and the restoration of nature.

7. The biblical theology of stewardship in relation to man's care and treatment of the earth.

Based upon this study, the following conclusions have been made:

1. Man is at the center of the ecological crisis as both the offender and the offended.

2. Through abuse and exploitation, man has brought himself and his ecosystem to the brink of catastrophe.

3. Theology has a legitimate concern in the ecology crisis because of its grounding in the Word of God, the Bible, which proclaims the divinely ordained plan for man's relationship with nature.

4. Pertinent religious periodical literature, though highly diversified with respect to approach and opinion, has addressed itself to the ecology crisis under two main divisions, viz., ethics and theology.

5. Books within the emerging stream of ecological theology, though generally in agreement as to the spiritual basis of the problem, differ in relation to the means by which the crisis can be resolved.

6. A more thorough investigation of the doctrines of the church must be undertaken in order to produce a truly systematic theology of ecology.

## BIBLIOGRAPHY

## BIBLIOGRAPHY

### A. PERIODICALS

#### 1. Primary Sources

- Alpers, Kenneth P. "Starting Points for an Ecological Theology: A Bibliographical Survey," Dialog, IX (Summer, 1970), 226-232.
- Anderson, Robert. "An Ecological Conscience for America," Social Action, XXXIV (May, 1968), 5-20.
- Baer, Richard A., Jr. "Conservation: An Arena for the Church's Action," The Christian Century, LXXXVI (January 8, 1969), 40-43.
- \_\_\_\_\_. "Conservation Problems More Human Than Technological," Catalyst, II (Fall, 1967), 4-5.
- \_\_\_\_\_. "Ecology, Religion, and the American Dream," The American Ecclesiastical Review, CLXV (September, 1971), 43-59.
- \_\_\_\_\_. "Environmental Turnabout." 1972. (Mimeographed.)
- \_\_\_\_\_. "If The Earth is The Lord's . . .," ESR Report, LXXVI (Winter, 1969-70), 1-2.
- \_\_\_\_\_. "Land Misuse: A Theological Concern," The Christian Century, LXXXIII (October 12, 1966), 1239-1241.
- Barbour, Ian G. "An Ecological Ethic," The Christian Century, LXXXVII (October 7, 1970), 1180-1184.
- Brueggemann, Walter. "King in the Kingdom of Things," The Christian Century, LXXXVI (September 10, 1969), 1165-1166.
- Bullock, Wilbur L. "Ecology and Apocalypse," Christianity Today, XV (April 23, 1971), 20-21, 24.
- Callahan, Daniel. "What Obligations Do We Have to Future Generations?" The American Ecclesiastical Review, CLXIV (April, 1971), 265-280.
- Cobb, John B., Jr. "Ecological Disaster and the Church," The Christian Century, LXXXVII (October 7, 1970), 1185-1187.
- Daetz, Douglas. "No More Business as Usual," Dialog, IX (Summer, 1970), 171-175.
- Dewolf, Harold L. "Theology and Ecology," The American Ecclesiastical Review, CLXIV (March, 1971), 154-170.

- Doan, Gilbert E., Jr. "Toward a Life Style Environmentally Informed," The Lutheran Quarterly, XXIII (November, 1971), 305-316.
- Editorial. "Terracide," Christianity Today, XV (April 23, 1971), 26-27.
- Elwood, Douglas J. "Primitivism or Technocracy: Must We Choose?" The Christian Century, LXXXVIII (December 1, 1971), 1413-1418.
- "Environmental Crisis, A Statement on Environmental Renewal," Church and Society, LXI (July-August, 1971), 21-26.
- Gibbs, John G. "Pauline Cosmic Christology and Ecological Crisis," Journal of Biblical Literature, XC (December, 1971), 466-479.
- Graham, David, and Robert Theobald. "The Changing Environment: Does the Church Have a Major Responsibility?" National Council of Churches of Christ in the U.S.A., October 2, 1969. (Mimeographed.)
- Harder, Allen. "Ecology, Magic and the Death of Man," Christian Scholar's Review, I (Winter, 1971), 117-131.
- Hayes, Denis. "Environmental Action," Theology Today, XXVII (October, 1970), 256-262.
- Houston, James M. "The Environmental Movement - Five Causes of Confusion," Christianity Today, XVI (September 15, 1972), 8-10.
- Kreider, Robert. "Pollution: A Spritual Crisis," The Mennonite, (April 21, 1970), 274-277.
- Kuhn, Harold B. "Environmental Stewardship," Christianity Today, XIV (May 8, 1970), 46-47.
- Leliaert, Richard. "All Things Are Yours . . .," The Homiletic and Pastoral Review, LXX (May, 1970), 573-578.
- Limburg, James. "What Does It Mean to 'Have Dominion Over the Earth'?" Dialog, X (Summer, 1971), 221-223.
- Livingston, James C. "The Ecological Challenge to Christian Ethics," The Christian Century, LXXXVIII (December 1, 1971), 1409-1412.
- MacQuarrie, John. "Creation and Environment," The Expository Times, LXXXIII (October, 1971), 4-9.
- McCormick, Richard A. "Notes on Moral Theology: April--September, 1970," Theological Studies, XXXII (March, 1971), 66-122.
- Means, Richard L. "Ecology and the Contemporary Religious Conscience," The Christian Century, LXXXVI (December 3, 1969), 1546-1549.
- \_\_\_\_\_. "Man and Nature: The Theological Vacuum," The Christian Century, LXXV (May 1, 1968), 579-581.



- \_\_\_\_\_. "Why Worry About Nature?" Saturday Review, L (December 2, 1967), 13-15.
- Miller, Howard A. "Man: Created to Be an Earth Keeper," Brethren Life and Thought, XV (Spring, 1970), 74-78.
- Moellering, Ralph L. "The Environmental Crisis and Christian Responsibility," Concordia Theological Monthly, XLII (March, 1971), 176-182.
- National Association of Evangelicals. "Ecology." Policy Resolutions Adopted by the National Association of Evangelicals, 1970.
- Nelson, Dwight U. "Bibliography on Ecology." Wilmore: Asbury Theological Seminary, 1970. (Mimeographed.)
- "Pro-Seminar: Historical and Theological Perspective on the Ecological Crisis." Cambridge: Episcopal Theological School, 1971. (Mimeographed.)
- Reidel, Carl H. "Christianity and the Environmental Crisis," Christianity Today, XV (April 23, 1971), 4-8.
- \_\_\_\_\_. "To Celebrate Spring." Wayland, Massachusetts: Peace Lutheran Church, May 6, 1972. (Mimeographed.)
- Sittler, Joseph. "Ecological Commitment as Theological Responsibility," Southwestern Journal of Theology, XIII (Spring, 1971), 35-45.
- Teske, Myron. "On Recycling Symbols in Dialogue Between Theologians and Scientists," The Lutheran Quarterly, XXIII (November, 1971), 317-328.
- West, Charles C. "Theological Guidelines for the Future," Theology Today, XXVII (October, 1970), 277-291.
- White, Lynn, Jr. "The Historical Roots of Our Ecologic Crisis," Science, CLV (March 10, 1967), 1203-1207.
- Williams, Donald L. "Our Environment: A Challenge to Reason," Church and Society, LX (January-February, 1970), 19-26.
- Wright, Richard. "Responsibility for the Ecological Crisis," Christian Scholar's Review, I (Fall, 1970), 35-40.
- Wrightsmen, Bruce. "Man: Manager or Manipulator of the Earth," Dialog, IX (Summer, 1970), 200-214.
- Zuck, Robert K. "Conservation and Ecology," The Drew Gateway, XL (Winter, 1970), 102-107.

## 2. Secondary Sources

- Carrick, Ian. "A Right Involvement with Nature," Frontier, XIII (February, 1970), 31-33.
- Daetz, Douglas. "Heading Off Eco-Catastrophe: A Job for New Adam," Lutheran Quarterly, XXII (August, 1970), 271-278.
- Ditmanson, Harold H. "New Insights on the Nature of Man and Implications for Christology," The Lutheran Quarterly, XXIII (November, 1971), 335-355.
- "Ecologism: A New Paganism?" Christianity Today, XIV (April 10, 1970), 33-34.
- Freudenstein, Eric G. "Ecology and the Jewish Tradition," Judaism, XIX (Fall, 1970), 406-414.
- Frøehlich, Karlfried. "The Ecology of Creation," Theology Today, XXVII (October, 1970), 263-276.
- Gowan, Donald E. "Genesis and Ecology: Does 'Subdue' Mean 'Plunder'?" The Christian Century, LXXXVII (October 7, 1970), 1188-1191.
- Helfand, Jonathan I. "Ecology and the Jewish Tradition: A Postscript," Judaism, XX (Summer, 1971), 330-355.
- Hoyt, William R. "Zen Buddhism and Western Alienation from Nature," The Christian Century, LXXXVII (October 7, 1970), 1194-1196.
- McCormack, Arthur. "Subduing the Earth," Frontier, XV (March, 1972), 35-38.
- McElvaney, William K. "Theology for Ecology: Will Man Survive?" Christian Advocate, XIV (February 5, 1970), 7-8.
- Martensen, Daniel F. "Theologizing in an Ecological Matrix," Dialog, IX (Summer, 1970), 192-199.
- Orr, Norman. "Ecological Insights," Christian Advocate, XIV (November 26, 1970), 11-12.
- Santmire, H. Paul. "Ecology and Schizophrenia: Historical Dimensions of the American Crisis," Dialog, IX (Summer, 1970), 175-192.
- Shepherd J. Barrie. "Theology for Ecology," The Catholic World, CCXI (July, 1970), 172-175.
- Stange, Douglas C. "A Bibliography on Religion and Ecology for Lutherans," The Lutheran Quarterly, XXIII (November, 1971), 329-334.

Thorpe, W. H., et al. "Nature," The Modern Churchman, XIV (October, 1970), 9-42.

Williams, George Huntston. "Christian Attitudes Toward Nature," Christian Scholar's Review, II (Winter, 1972), 112-126.

## B. BOOKS

### 1. Ecology Crisis

Air Pollution Primer. National Air Conservation Commission. New York: National Tuberculosis and Respiratory Disease Association, 1969.

Anderson, Paul K. (ed.). Omega: Murder of the Ecosystem and Suicide of Man. Dubuque: Wm. C. Brown Company Publishers, 1971.

Brubaker, Sterling. To Live on Earth, Man and His Environment in Perspective. New York: The New American Library, Inc., 1972.

Carson, Rachel. Silent Spring. Greenwich: Fawcett Publications, Inc., 1962.

The Commission on Population Growth and the American Future. Population and the American Future. New York: The New American Library, Inc., 1972.

Davis, Wayne H. (ed.). Readings in Human Population Ecology. Englewood Cliffs: Prentice-Hall, Inc., 1971.

DeBell, Garrett (ed.). The Environmental Handbook. New York: Ballantine Books, Inc., 1970.

Ehrlich, Paul R. The Population Bomb. New York: Ballantine Books, Inc., 1968.

\_\_\_\_\_, Paul and Anne. Population, Resources, Environment: Issues in Human Ecology. San Francisco: Freeman, 1970.

Graham, Frank, Jr. Since Silent Spring. Greenwich: Fawcett Publications, Inc., 1970.

Hinrichs, Noel (ed.). Population, Environment & People. New York: McGraw-Hill Book Company, 1971.

Lader, Lawrence. Breeding Ourselves to Death. New York: Ballantine Books, 1971.

Murdoch, William W. (ed.). Environment, Resources, Pollution & Society. Stamford: Sinauer Associates Inc., 1971.

Packard, Vance. The Waste Makers. New York: Pocket Books, 1960.

Shepard, Paul, and Daniel McKinley (eds.). Environ/mental, Essays on the Planet as a Home. Boston: Houghton Mifflin Company, 1971.

Zwick, David. Water Wasteland, Ralph Nader's Study Group Report on Water Pollution. New York: Bantam Books, Inc., 1971.

## 2. Theology of Ecology

Barnette, Henlee H. The Church and the Ecological Crisis. Grand Rapids: William B. Eerdmans Publishing Company, 1972.

Cobb, John B., Jr. Is It Too Late? A Theology of Ecology. Faith and Life Series. Beverly Hills: Bruce, 1972.

Elder, Frederick. Crisis in Eden: A Religious Study of Man and Environment. Nashville: Abingdon Press, 1970.

Folsom, Paul. And Thou Shalt Die in a Polluted Land, An Approach to Christian Ecology. Liquori, Missouri: Liquorian Pamphlets & Books, 1971.

Geisler, Norman L. Ethics: Alternatives and Issues. Grand Rapids: Zondervan Publishing House, 1971.

Klotz, John W. Ecology Crisis, God's Creation and Man's Pollution. St. Louis: Concordia Publishing House, 1971.

McHarg, Ian L. Design With Nature. Garden City: The Natural History Press, 1969.

Moule, C. F. D. Man and Nature in the New Testament, Some Reflections on Biblical Ecology. Biblical Series, No. 17. Philadelphia: Fortress Press, 1964.

Santmire, H. Paul. Brother Earth: Nature, God and Ecology in Time of Crisis. New York: Thomas Nelson Inc., 1970.

Schaeffer, Francis A. Pollution and the Death of Man, The Christian View of Ecology. Wheaton: Tyndale House Publishers, 1970.

Scoby, Donald R. (ed.). Environmental Ethics, Studies of Man's Self-Destruction. Minneapolis: Burgess Publishing Company, 1971.

Sherrell, Richard E. (ed.). Ecology: Crisis and New Vision. Richmond: John Knox Press, 1971.

Slusser, Dorothy M., and Gerald H. Slusser. Technology - The God That Failed. Philadelphia: The Westminster Press, 1971.

Stone, Glenn C. (ed.). A New Ethic for a New Earth. Faith-Man-Nature Group Papers, No. 2. New York: Friendship Press, 1971.

### 3. Relevant Theological Writings

- Berkouwer, G. C. Man: The Image of God. Grand Rapids: Wm. B. Eerdmans Publishing Company, 1962.
- Cairns, David. The Image of God in Man. London: S.C. M. Press, Ltd., 1953.
- Carter, Charles W. (ed.). The Wesleyan Bible Commentary. 10 vols. Grand Rapids: William B. Eerdmans Publishing Company, 1965.
- Earlham School of Religion, Department of Philosophy and Religion. Personal correspondence between Dr. Richard A. Baer, Jr., Associate Professor, and the writer. June 21, 1972.
- Eichrodt, Walther. Man in the Old Testament, trans. by K. and R. Gregor Smith. Chicago: Alec R. Allenson Inc., 1951.
- Harper, A. F., Ralph Earle, et al. (eds.). Beacon Bible Commentary. 10 vols. Kansas City: Beacon Hill Press of Kansas City, 1969.
- The Holy Bible; Revised Standard Version. New York: Thomas Nelson & Sons, 1952. 1019 pp.
- Hough, Lynn Harold. The Dignity of Man. New York: Abingdon-Cokesbury Press, 1950.
- Kantonen, T. A. A Theology for Christian Stewardship. Philadelphia: Muhlenberg Press, 1956.
- Kauffman, Milo. The Challenge of Christian Stewardship. Scottdale, Pennsylvania: Herald Press, 1955.
- Kittel, Gerhard (ed.). Theological Dictionary of the New Testament. 10 vols. Grand Rapids: Wm. B. Eerdmans Publishing Company, 1964.
- Machen, J. Gresham. The Christian View of Man. Grand Rapids: Wm. B. Eerdmans Publishing Co., 1947.
- Niebuhr, Reinhold. The Nature and Destiny of Man. 2 vols. New York: Charles Scribner's Sons, 1941.
- Pedersen, Johannes. Israel, Its Life and Culture. 4 vols. London: Oxford University Press, 1926.
- Sauer, Erich. The King of the Earth, The Nobility of Man According to the Bible and Science. Grand Rapids: Wm. B. Eerdmans Publishing Company, 1962.
- Schaeffer, Francis A. Death in the City. Downers Grove: Inter-Varsity Press, 1969.

- \_\_\_\_\_. Genesis in Space and Time. Downers Grove: Inter-Varsity Press, 1972.
- \_\_\_\_\_. The God Who Is There. Downers Grove: Inter-Varsity Press, 1968.
- Thompson, T. K. Handbook of Stewardship Procedures. Englewood Cliffs: Prentice-Hall, Inc., 1964.
- Trueblood, D. Elton. The New Man for Our Time. New York: Harper & Row, Publishers, 1970.
- \_\_\_\_\_. Philosophy of Religion. New York: Harper & Brothers Publishers, 1957.
- Wynkoop, Mildred Bangs. "A Biblical Study of Man in His Relationship to the Image of God." Unpublished Bachelor of Divinity thesis, Western Evangelical Seminary, Portland, Oregon, 1952.

## APPENDIXES

## Appendix A

### ASBURY THEOLOGICAL SEMINARY BIBLIOGRAPHY

- AMA Congress on Environmental Health Problems (1st Congress), May 1-2, 1964, Proceedings. Sponsored by Council on Environmental and Public Health and the Department of Environmental Health, Division of Scientific Activities, American Medical Association, Chicago.
- AMA Congress on Environmental Health Problems (2nd Congress), April 26-27, 1965, Proceedings.
- AMA Congress on Environmental Health Problems (3rd Congress), April 4-5, 1966, Chicago, Proceedings.
- AMA Congress on Environmental Health Problems (4th Congress), April 24-26, 1967, New York City, Proceedings.
- AMA Congress on Environmental Health Problems (5th Congress), 1968, Chicago, Proceedings.
- AMA Congress on Environmental Health Problems (6th Congress), April 28-29, Chicago, Proceedings.
- About the Conservation Foundation, The Conservation Foundation, 1250 Connecticut Ave., N.W., Washington, D.C., 20036.
- America the Beautiful, Address by Russell E. Train, President, the Conservation Foundation, above address.
- "Aspects of Environmental Management," Part II, Congressional White Paper on a National Policy for the Environment: under the auspices of the Senate Committee on Interior and Insular Affairs and the House Committee on Science and Astronauts, Ninetieth Congress, Second Session, Serial T, October, 1965. U.S. Government Printing Office, Washington, D.C., 1968. (pp. 1-6).
- Challenge to Youth, Russell E. Train, President, the Conservation Foundation, Je, 1966.
- The Changing Environment: Does the Church Have a Major Responsibility? David Graham and Robert Theobald.
- "Christians in the Technical and Social Revolutions of Our Time," World Conference on Church and Society, 1966.
- "Conservation: An Arena for the Church's Action," Richard A. Baer, in The Christian Century, January 8, 1969.



- "Conservation Problems More Human Than Technological," Richard A. Baer, Jr., in The Christian Century, Fall of 1967.
- "The Conservationist's View of Conservation," Russell E. Train, in The Science Teacher, April, 1967.
- "DDT Declining Deadly Toxin," in Connecticut Conservation Reporter, May-June, 1969, Mystic, Connecticut.
- "Ecology and the Contemporary Religious Conscience," in The Christian Century, December 3, 1969.
- "The Future of Humanity," Robert L. Herbst, Executive Director, The Izaak Walton League of America.
- "The Future of Man and Society in a World of Science-Based Technology," in Prospectus for an Ecumenical Enquiry, Department on Church and Society, World Council of Churches.
- Heat Can Hurt, Better Water for America, U.S. Department of the Interior, Federal Water Pollution Control Administration, September, 1969.
- "The Historical Roots of Our Ecologic Crisis," Lynn White, in Science, March 10, 1967.
- "If the Earth is the Lord's," Richard A. Baer, in Earlham School of Religion Report, Winter Issue, 1969-70.
- "King in the Kingdom of Things," from Toward Environmental Stewardship, by Walter Brueggemann, in The Christian Century, September 10, 1969.
- "Land Misuse: A Theological Concern," Richard A. Baer, Jr., in The Christian Century, October 12, 1966.
- "Our Environmental Exploitation or Renewal?" Alton A. Lindsey, Department of Biological Science, Purdue University, in Concern, February 1, 1965.
- "The Park Idea and Ecological Reality," F. Fraser Darling, in May issue, 1969, of National Parks Magazine, official publication of the National Parks Association.
- Pollution Causes Fish Kills, 1968, U.S. Department of the Interior, Federal Water Pollution Control Administration. Prepared by the Office of Public Information, Federal Water Pollution Control Administration, Washington, D.C., 20242.
- A Primer on Waste Water Treatment, U.S. Department of the Interior, Federal Water Pollution Control Administration, October, 1969 (CWA-12). For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, Price, 50 cents.

"Projected Directions and New Developments in Water Quality Standards," Remarks by David D. Dominick, Commissioner, Federal Water Pollution Control Administration, Department of the Interior, Washington, D.C., given before the Industrial Waste Forum, Water Pollution Control Federation Meeting at Dallas, Texas, October 8, 1969.

"A Rationale For Christian Involvement in Environmental Issues," Conference on Human Survival and Quality of Life, in Washington, D.C., October 15-18, 1970, in Section on Stewardship and Benevolence, National Council of Churches of Christ in the U.S.A.

"Restoring the Quality of Our Environment," Report of the Environmental Pollution Panel, President's Science Advisory Committee, The White House, November 5, 1965, (pp. 3-9; 13-15; 16-17; 62-65; 193-200.

Wetlands and the Cities, by William A. Niering, reprinted from Massachusetts Audubon, Narragansett Naturalist, Maine Field Naturalist, Connecticut Conservation, September, 1968.

"Why Worry About Nature?" Richard Means in Saturday Review, December 2, 1967.

"Wishing Won't Make Our Water Clean," in Water Pollution Control Federation, The 42nd Annual Conference, Dallas, Texas, October 6, 1969.

## Appendix B

### EPISCOPAL THEOLOGICAL SCHOOL BIBLIOGRAPHY

#### 1. The Christian Tradition

- Anderson, Bernhard, Creation versus Chaos, (New York 1967).
- Baillie, John, Natural Science and the Spiritual Life, (Oxford 1951).
- Barth, Karl, The Doctrine of Creation (four volumes from Church Dogmatics, 1958-61. Edinburgh).
- Birch, Charles L., Nature and God (Philadelphia 1965).
- Black, John, The Dominion of Man (Chicago 1970).
- Bonhoeffer, Dietrich, Creation and Fall (New York 1959).
- Bonifazi, Conrad, A Theology of Things: A Study of Man in His Physical Environment.
- Boulding, Kenneth, Human Values on the Space Ship Earth (National Council of Churches '66).
- Brunner, Emil, The Christian Doctrine of Creation and Redemption, (Philadelphia 1952).
- Buber, Martin, I and Thou, (Edinburgh 1944).
- Clark, Henry, The Ethical Mysticism of Albert Schweitzer, (Boston 1962).
- Cobb, John A., A Christian Natural Theology, (Phil. 1965).
- Demant, V.A., The Idea of a Natural Order, (Phil. 1966).
- Elder, Frederick, Crisis in Eden: A Religious Study of Man and His Environment.
- Emerson, Ralph Waldo, Nature, Addresses, and Lectures (1855), in Works I (Boston 1883).
- Francoeur, Robert, Evolving World, Converging Man, (New York 1970).
- Galloway, Allan, The Cosmic Christ, (London 1951).
- Gilkey, Langdon, Maker of Heaven and Earth, (New York 1959).
- Grant, Robert M., Miracle and Natural Law in Graeco-Roman and Early Christian Thought (Amsterdam 1952).
- Hartshorne, Charles, The Divine Relativity, (New Haven 1953).
- Heim, Karl, Christian Faith and Natural Science, (N.Y. 1956).
- Kuhns, William, Environmental Man, (N.Y. 1969).
- Mascall, E.L., Christian Theology and Natural Science, (N.Y. 1956).

- Miller, Perry, Nature's Nation, (Cambridge 1967).
- Montefiore, Hugh, "Man's Dominion," Theology, 1965, pp. 41-46.
- Moule, C. F. D., Man and Nature in the New Testament: Some Reflections on Biblical Ecology, (Phil. 1967).
- New Theology No. 8.
- Niebuler, H. Richard, The Responsible Self, (New York 1963).
- Niebuler, H. Richard, Radical Monotheism and Western Culture, (New York 1960).
- O'Connor, Daniel and Oakley, Frances, eds., Creation: The Impact of an Idea, (New York 1969).
- Overman, Richard, Evolution and the Christian Doctrine of Creation: A Whiteheadian Interpretation, (Phil. 1967).
- Pelikan, Jareslov "Creation and Causality in the History of Christian Thought," in Tax. ed., Evolution After Darwin, vol. 3 (Chicago 1960).
- Rahner, Karl, Hominization: The Evolutionary Origin of Man as a Theological Problem, (New York 1965).
- Raven, Charles E., Natural Religion and Christian Theology, (Cambridge 1953).
- Robinson, John A. T., The Body: A Study in Pauline Theology, (London 1957).
- Rust, Eric, Evolutionary Philosophies and Contemporary Theology, (Phil. 1969).
- \_\_\_\_\_. Nature: Garden or Desert? (Waco, Texas 1971).
- \_\_\_\_\_. Nature and Man in Biblical Thought, (London 1953).
- Santmire, Paul, Brother Earth, (New York 1970).
- Sittler, Joseph "A Theology for Earth," The Christian Scholar, vol. 37 (1954).
- Stefferdud, Alfred, ed. Christians and the Good Earth, (Alexandria 1967).
- Temple, William, Nature, Man and God, (London 1934).
- Tillich, Paul, Systematic Theology, (Chicago 1963) passim.
- Von Rad, Gerhard, Genesis: A Commentary, (Phil. 1961).
- Wallace-Hadrill, D.S., The Greek Patristic View of Nature, (New York 1968).
- Webb, Clement, C. J. Studies in the History of Natural Theology, (Oxford 1915).
- Westfall, Richard, Science and Religion in Seventeenth Century England, (New Haven 1958).
- White, Hugh, Christians in a Technological Era, (N.Y. 1964).
- Williams, George H., Wilderness and Paradise in Christian Thought: The Biblical Experience of the Desert in the History of Christianity and the Paradise Theme in the Theological Idea of the University, (N.Y. 1962).
- Wolf, William, No Cross, No Crown: A Study of the Atonement, (New York 1967).

World Council of Churches, World Conference on Church & Society, 1967.

## 2. Ecological Perspective

- Barbour, Ian, Issues in Science and Religion, (Englewood Cliffs 1966).
- Bates, Marston, The Forest and the Sea: A Look at the Economy of Nature and the Ecology of Man, (New York 1961).
- \_\_\_\_\_. Man in Nature (Englewood Cliffs 1964).
- Berrill, N. J., Inherit the Earth, (New York 1949).
- Beston, Henry, The Outermost House, (New York 1949).
- Boodin, John, God and Creation: Three Interpretations of the Universe (New York 1934).
- Borland, Hal, Countryman: A Summary of Belief, (Phil. 1965).
- Collingwood, R.C., The Idea of Nature, (Oxford 1945).
- Darling, Frank Fraser, Wilderness and Plenty, (New York 1971).
- Dasmann, Raymond, A Different Kind of Country, (New York 1968).
- "Dialog," (Summer 1970).
- Disch, Robert, ed., The Ecological Conscience, (Englewood Cliffs 1970).
- Dobzhansky, T., The Biology of Ultimate Concern, (New York 1967).
- \_\_\_\_\_. The Biological Basis of Human Freedom, (N.Y. 1956).
- Douglas, William O., A Wilderness Bill of Rights, (Boston 1965).
- Dubos, Rene, Man Adapting, (New Haven 1965).
- \_\_\_\_\_. So Human An Animal, (New York 1970).
- \_\_\_\_\_. Man, Medicine, and Environment, (New York 1968).
- Editors of Ramparts, "Eco-Catastrophe," (New York 1970).
- Eiseley, Loren C., The Immense Journey, (New York 1957).
- \_\_\_\_\_. The Mind as Nature, (New York 1962).
- \_\_\_\_\_. The Firmament of Time, (New York 1960).
- \_\_\_\_\_. The Invisible Pyramid, (New York 1970).
- Ekirch, Arthur, Man and Nature in America, (New York 1963).
- Eliade, Mircea, Cosmos and History: The Myth of the Eternal Return, (New York 1959).
- Ellul, Jacques, The Technological Society, (New York 1964).
- Farb, Peter, Ecology, (New York 1963).
- \_\_\_\_\_. Man's Rise to Civilization As Shown by the Indians of North America from Primeval Times to the Coming of the Industrial State, (New York 1968).
- Fuller, R. Buckminster, Operating Manual for Spaceship Earth, (New York 1970).
- \_\_\_\_\_. Utopia or Oblivion: The Prospects for Humanity, (New York 1969).
- Galbraith, John Kenneth, The Affluent Society, (Boston 1958).
- \_\_\_\_\_. The New Industrial State, (Boston 1967).
- \_\_\_\_\_. The New Industrial State, (New York 1969).

- Graham, Frank, Man's Dominion: The Story of Conservation in America, (New York 1971).
- Hamilton, Michael, ed., This Little Planet, (New York 1970).
- Haselden, Kyle and Hefner, Philip eds., Changing Man: the Threat and the Promise, (New York 1968).
- Henderson, Lawrence J., The Fitness of the Environment, (Boston 1966).
- Huizinga, Johan, Homo Ludens, (Boston 1955).
- Huth, Hans, Nature and the American: Three Centuries of Changing Attitudes, (Berkeley 1957).
- Kroeber, T., Ishi, (Berkeley 1961).
- Krutch, Joseph Wood, The Great Chain of Life, (Boston 1957).
- Leopold, Aldo, A Sand County Almanac, (Oxford 1966).
- Lovejoy, Arthur O., The Great Chain of Being, (Cambridge 1957).
- Malthus, Thomas Robert, Essay on the Principles of Population, (Modern Library, 1960).
- Marsh, George Perkins, Man and Nature, (Cambridge 1965).
- Marx, Leo, The Machine in the Garden: Technology & the Pastoral Ideal in America, (New York 1964).
- Melville, Herman, Moby Dick or the White Whale, (New York 1961).
- Mumford, Lewis, The Myth of the Machine, (New York 1970).
- Nash, Roderick, Wilderness and the American Mind, (New Haven 1967).
- Olson, Sigurd, Open Horizons, (New York 1969).
- Peterson, Roger and Fisher, James, Wild America, (Boston 1963).
- Robinson, H. Wheeler, Inspiration and Revelation in the Old Testament, (Oxford 1946).
- Scheler, Max, Man's Place in Nature, (Boston 1961).
- Schwartz, William, ed., Voices for the Wilderness, (New York 1969).
- Schweitzer, A., Christianity and the Religions of the World, (N.Y. 1932).
- \_\_\_\_\_. Civilization and Ethics.
- \_\_\_\_\_. My Life and Thought.
- Sears, Paul, The Living Landscape, (New York 1966).
- Shepard, Paul, Man in the Landscape: A Historic View of the Esthetics of Nature, (New York 1967).
- Storer, John H., Man in the Web of Life, (New York 1968).
- Teale, Edwin W., The Wilderness World of John Muir, (Boston 1954).
- Teilhard de Chardin, Pierre, The Phenomenon of Man, (New York 1959).
- \_\_\_\_\_. Man's Place in Nature, (New York 1956).
- \_\_\_\_\_. Hymn of the Universe, (New York 1965).
- Thoreau, Henry David, Walden, Journals.
- Udall, Stewart, The Quiet Crisis, (New York 1963).
- Van Dyke, John C., Nature for Its Own Sake, (New York 1908).
- Wagner, Philip, The Human Use of the Earth, (New York 1964).
- Whitehead, Alfred North, Nature and Life, (Chicago 1934).
- \_\_\_\_\_. Process and Reality, (London 1929).
- \_\_\_\_\_. Science and the Modern World, (New York 1925).

Whole Earth Catalog, Portola Institute.

### 3. Ecological Problems

- Barbour, Ian, Science and Secularity: the Ethics of Technology, (New York 1970).
- Berelson, Bernard, "Beyond Family Planning," Science, (February 1969).
- Borgstrom, Georg, Too Many: A Study of the Earth's Biological Limitations, (New York 1969).
- Brown, Harrison, The Challenge of Man's Future, (New York 1954).
- \_\_\_\_\_. The Challenge of Man's Future, (New York 1969).
- Burton, Jan and Kates, Robert, Readings in Resource Management and Conservation, (Chicago 1965).
- Carson, Rachel, Silent Spring, (Boston 1962).
- \_\_\_\_\_. The Sea Around Us, (Oxford 1951).
- Cauldwell, Lynton, Environment: A Challenge for Modern Society, (New York 1970).
- Cepede, Michel, Houtart, Francois; and Ground, L. Population and Food, (New York 1964).
- Clarke, George L., Elements of Ecology, (New York 1966).
- Cloud, Preston, ed., Resources and Man, (San Francisco 1969).
- Commoner, Barry, Science and Survival, (New York 1967).
- Cotton, Steve ed., Earth Day - The Beginning, (New York 1970).
- "Daedalus" America's Changing Environment, (Fall 1967).
- Darling, F. Fraser and Milton, John, Future Environments of North America: Transformation of a Continent, (New York 1966).
- Dasmann, Raymond, A Different Kind of Country, (New York 1968).
- Davies, J. Clarence, The Politics of Pollution, (New York 1970).
- DeBell, Garrett, ed., The Environmental Handbook, (New York 1970).
- Dyck, Arthur J., "Religious Factors in the Population Problem," in The Religious Situation, ed. Donald Cutler (Boston 1968).
- Edelson, Edward and Fred Warshofsky, Persons in the Air, (New York 1966).
- Ehrenfelt, David, Biological Conservation, (New York 1970).
- Ehrlich, Paul, The Population Bomb, (New York 1968).
- \_\_\_\_\_. Paul and Anne, Population, Resources, Environment: Issues in Human Ecology, (San Francisco 1970).
- Environmental Quality: First Annual Report of the Council on Environmental Quality, (Washington 1970).
- Fagley, Richard M., The Population Explosion and Christian Responsibility, (New York 1960).
- Fisher, James, Simon, Noel, and Vincent, Jack, Wildlife in Danger, (New York 1969).
- Goldman, Marshall, Controlling Pollution: the Economics of a Cleaner America, (Englewood Cliffs 1967).

- Graham, Frank, Since Silent Spring, (Boston 1970).
- Hardin, G., ed., Population, Evolution and Birth Control, (San Francisco 1969).
- Helfrich, Harold, ed., The Environmental Crisis: Man's Struggle to Live With Himself, (New Haven 1970).
- Jarrett, Henry, Environmental Quality in a Growing Economy, (Baltimore 1966).
- \_\_\_\_\_. ed. Perspectives on Conservation, (Baltimore 1969).
- Kormondy, Edward, Concepts of Ecology, (Englewood Cliffs 1969).
- Laycock, George, The Diligent Destroyers, (Garden City 1970).
- Leinwand, Gerald, Air and Water Pollution, (New York 1969).
- Linton, Ron, Terricide-America's Destruction of Her Living Environment, (Boston 1970).
- Lord, Russell, The Case of the Earth, (New York 1963).
- Man's Impact on the Global Environment, (M.I.T. Report 1970).
- Mark, Wesley, The Frail Ocean, (New York 1969).
- McClosky, Maxine, and Gilligan, James, Wilderness and the Quality of Life, (Sierra Club 1969).
- McHarg, Ian, Design with Nature, (Garden City 1969).
- Meach, David, The Wolf, (New York 1970).
- Mitchell, John, and Stallings, Constance, eds., Ecotactics: The Sierra Club Handbook for Environmental Activists, (New York 1970).
- See Bibliography.
- Mowbray, A. Q., The Road to Ruin: A Critical View of the Federal Highway Program, (Publ. 1969).
- Navarra, John Gabriel, Our Noisy World, (Garden City 1969).
- Odum, Howard, Environment, Power and Society, (New York 1970).
- Odum, Eugene, Ecology, (New York 1963)
- Osborn, Fairfield, The Limits of Earth, (Boston 1953).
- \_\_\_\_\_. Our Plundered Planet, (Boston 1970).
- \_\_\_\_\_. ed. Our Crowded Planet, (Garden City 1962).
- Paddock, William and Paul, Famine 1975!, (Boston 1967).
- Revelle, Roger, ed., America's Changing Environment, (Boston 1970).
- Ridgeway, James, The Politics of Pollution, (New York 1970).
- Rienow, Robert and Leona, Moment in the Sun: A Report on the Deteriorating Quality of the American Environment, (New York 1969).
- Rudd, R. L., Pesticides in the Living Landscape, (Madison 1964).
- Saltonstall, Richard, Your Environment and What You Can Do About It, (New York 1970).
- Sax, Joseph L., Defending the Environment, (New York 1971).
- Scheffer, Victor, The Year of the Whale, (New York 1970).
- Shepard, Paul and McKinley, Daniel, eds., The Subversive Science: Essays Toward An Ecology of Man, (Boston 1969).
- Thomas Jr., William L. ed., Man's Role in Changing the Face of the Earth, (Chicago 1956).



Toward Balanced Growth: Quantity with Quality, Report of National Goals Research Staff (Washington 1970).

Ward, Barbara, Spaceship Earth, (New York 1966).

Whiteside, Thomas, Defoliation, (New York 1970).

Whyte, William, The Last Landscape, (Garden City 1970).

Yale Forest School Bull. 76. Man and His Environment: The Ecological Limits of Optimism, (New Haven 1970).