THE ONE BODY OF CHRISTIAN ENVIRONMENTALISM

by Raymond E. Grizzle and Christopher B. Barrett

Abstract. Using a conceptual model consisting of three intersecting spheres of concern (environmental protection, human needs provision, and economic welfare) central to most environmental issues, we map six major Christian traditions of thought. Our purpose is to highlight the complementarities among these diverse responses in order to inform a more holistic Christian environmentalism founded on one or more of the major tenets of each of the six core traditions. Our approach also incorporates major premises of at least the more moderate versions of biocentrism, ecocentrism, and anthropocentrism. We label this holistic approach "cosmocentrism" and use it as the basis for a preliminary description of the notion of "pluralistic stewardship." We argue that only such holistic environmental perspectives, where societal needs are more directly coupled with environmental protection, and a pluralism of worldviews are acknowledged as potentially contributing to such efforts are capable of successfully addressing the complex issues we face today. We note that, at the international level in particular, Christian thought and secular environmentalism already have been moving in such a direction.

Keywords: anthropocentrism; biocentrism; Christianity; cosmocentrism; ecocentrism; environmental ethics; environmentalism; global; holism; pluralism; stewardship.

In a seminal paper at the dawning of the contemporary environmental movement, Lynn White Jr. (1967) laid much of the blame for modern environmental problems on Christianity. An extreme anthropocentric perspective in Christianity, White argued, underpinned dominionistic attitudes that resulted in environmental degradations. White's paper opened a period of prolific, and perhaps unprecedented, Christian reflection and writing on environmental issues. In this paper we take stock of

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the ensuing three decades of Christian thought on environmental philosophy and issues broadly. We point out that there is no single "Christian environmentalism." Indeed, there is a rich diversity of Christian beliefs about creation and our place in it.

Saint Paul (1 Cor. 12) motivates our work; we see the various parts of contemporary Christian environmentalism as many parts of one body. Each offers some fundamental truths, but we suggest that each also has shortcomings. We begin with a description of a conceptual model that guides our analysis. In the next section we briefly describe six distinct environmental traditions in which Christians have participated. In trying to succinctly summarize the key features of each tradition, we likely do a disservice to the richness of these bodies of literature and thought. The point of that section, however, is to provide the building blocks for the following section, in which we try to outline the intersection of the different traditions. There we articulate what we label a "cosmocentric" perspective as the basis for a Christian environmentalism that consists of key elements from the six separate traditions as well as the major tenet of each of the more moderate versions of biocentrism, ecocentrism, and anthropocentrism. We call this "pluralistic stewardship." A brief concluding section highlights what we see as the critical next steps for Christian environmentalists.

A Conceptual Model and Some Preliminary Considerations

Our analysis is guided by a simple conceptual model drawn as a Venn diagram shown in figure 1. Each of the three spheres (shown two dimensionally as circles) relates one of the three major components of most environmental issues: environmental protection, basic human needs provision, and economic welfare.[1] We map the relative positions of the six major Christian traditions in our analysis with respect to this model. The area at the center of the diagram is, by construction, the least narrow and most inclusive region because it is where all three spheres overlap.

The model was first proposed in the context of a call for environmentalists generally to consider humans more fully as a part of nature.[2] Later, we used it as a tool for assessing the long-term sustainability of different movements active in contemporary environmental policy debates and for advancing development of sustainable public policy (Barrett and Grizzle 1998).

Pluralistic stewardship, which is discussed in more detail later in this paper, recognizes that there are multiple principles that should guide human interaction with the natural environment. Humans have legitimate needs[3] for survival, but we should behave humbly in ways that minimize our impacts on the earth and its nonhuman inhabitants, since we are

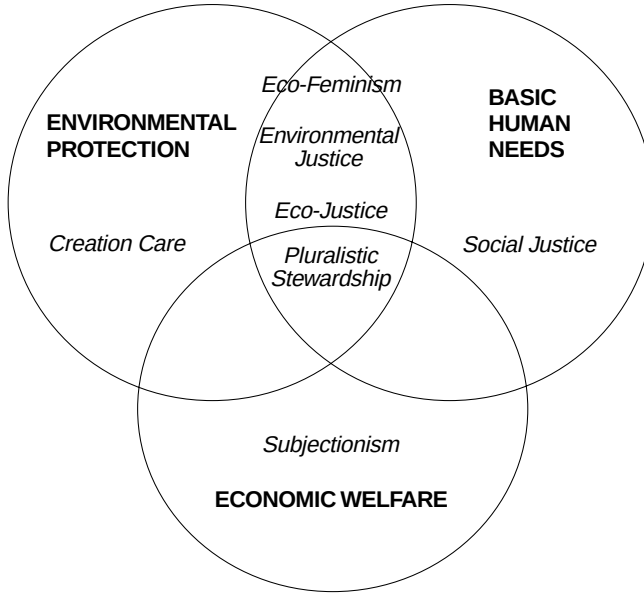

Fig. 1. Conceptual model of the intersection of three major spheres of concern for environmental issues generally, with six major Christian responses mapped according to their particular emphases.

fallible, sinful, and (along with the rest of creation) in need of redemption (Rom. 8). The cosmocentric view upon which our pluralistic stewardship is based incorporates all three lines of creaturely relationships with which Christian theology traditionally has dealt: human-human, human–other creatures, and human-environment (abiotic components). The model will be the lens through which we view and assess the various parts of Christian environmentalism.

Before proceeding, we feel it appropriate to set our analysis in the context of environmentalism more broadly. Our overall complaint about contemporary mainstream environmentalism is that it is too disconnected from other societal issues, just as much contemporary social activism is too detached from environmental matters. The foundational ecological premise of the interconnectedness of all biotic (including human) and abiotic components of the world seems to be widely (although by no means universally) ignored. We are very concerned about pollution, habitat degradation, biodiversity loss, and other pressing environmental issues. But these in no way diminish our parallel concerns about human hunger, disease, poverty, armed conflict, and other forms of human suffering. All of these issues can be found in the mainstream environmental literature,

but we feel the interconnections between the two broad areas they represent have been given insufficient and superficial treatment. Moreover, environmentalists, including many Christian environmentalists, do not seem to be moving toward correcting the problem.

One manifestation of the neglect of human needs by many environmentalists, or perhaps the cause of it, is a blatantly antihuman perspective on environmental issues generally. Some environmentalists' explicit objections to primal consideration of human needs may be traced to their conceptualization of humanity's relation to other parts of nature. Many simply do not consider humans a legitimate part of nature (see discussion in Cowell 1993). Or, human actions generally are deemed inferior to "natural" phenomena (e.g., Commoner's [1971] third law of ecology: "Nature knows best"). While humankind has done undeniable injury to the broader biosphere (as well as to itself, especially its weaker members), this reaction is theologically akin to hating both the sin and the sinner, not just the sin.

We believe instead, following Genesis 1 and 2, that God is the ultimate cause of the cosmos. God has created and sustains the heavens and the earth and all that is in them, including humanity. Our evolutionary history is inextricably intertwined with other components of creation. Nonetheless, humans bear God's "image" and have been given dominion over creation. While humans are always fallible in the exercise of this dominion, they can be redeemed by God's grace and be vessels by which God's love can be brought to all creation. Humanity is specifically charged to care for creation, itself included.

The Many Parts of the One Body of Christian Environmentalism

Much of the early Christian environmental literature was aimed at discrediting White's (1967) criticisms. This seems to have been largely successful. Though some environmentalists still denigrate Christianity, the prevailing opinion seems to be that exploitative and dominionistic attitudes attributed to Christianity are at most only part of the problem (Chiras 1992). Many branches of Christendom have made substantial progress not only in developing theologies of creation that squarely address major environmental issues but also in actively participating at all levels in solving related problems.

There is, however, no single "Christian environmentalism" today. Despite substantial, common reliance by most Christian environmentalists on the broader environmental literature, a rich diversity of Christian environmental philosophies has evolved. Invoking Saint Paul's metaphor (1 Cor. 12), this section analyzes six distinct "parts" of what we claim is one "body" of Christian environmentalism. Different branches of

Christianity have approached the issues from different directions. Each enjoys important scriptural support and has made positive contributions. But as human traditions, each is also fallible, narrow, and prone to disturbing excesses (Cobb 1992, 106). Nonetheless, when they are considered collectively, the result is a robust environmentalism that we believe is sufficient to provide both a Christian perspective on humanity's place in God's whole creation and a basis for public policy that can successfully address pressing environmental and social problems.

In the following subsections, we briefly describe six major traditions relevant to modern environmentalism. None is based on a uniquely Christian worldview, but each has been a focus point for Christians. We do not mean this to be a comprehensive taxonomy. Nor, for reasons of space, do we provide the full description that each tradition richly deserves. We encourage readers to plumb the associated references themselves. The first three fall most completely within only one of the three spheres of the model (fig. 1). The next three are explicit attempts at pluralism, with most proponents addressing at least two of the three spheres.

Subjectionism. For most of its history, the Christian church has emphasized human-God and human-human relationships; nonhuman components of creation have been given little attention. What we call the subjectionist perspective has a long history within Christianity, deriving its primary inspiration from the first chapter of Genesis:

> So God created man is his own image, in the image of God he created him; male and female he created them. And God blessed them, and God said to them, "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." (Gen. 1:27–28 RSV[4])

Subjectionists typically interpret this passage from the Creation story as a call to bring the nonhuman environment into subjection for the purpose of facilitating human expansion. It is perhaps not surprising, then, that more conservative branches of Christianity—notably fundamentalists and conservative evangelicals—commonly favor this perspective, which is essentially based on a "strong anthropocentrism" of the sort lambasted by White (1967).

Subjectionist arguments are varied but most lodge three major complaints against environmentalism (see Wright 1995 for review). Subjectionists dispute scientific claims of environmental degradations, profess environmentalism to be essentially "new age" thinking and therefore anti-Christian, and/or emphasize the substantial economic costs of environmental protection policies. With respect to the model depicted in figure 1, the common thread in these writings is concern over the economic welfare of humanity.[5] It is perhaps an illustrative semantic point that

Christian economists from this tradition invariably speak of "resource" economics rather than "environmental" or "ecological" economics. To them, the nonhuman components of the earth are primarily resources to be subdued and managed for the benefit of a sovereign humanity.

Economic concerns are sometimes considered the antithesis of environmentalism by both subjectionists and others, hence, the traditional perspective (in high-income countries) of a contest between environmental protection and economic growth. Our three-sphere model suggests that this long-standing view is inaccurate (see note 2). Over any period measured in generations or centuries, long-term economic well-being is an essential component of environmental protection and vice versa. The precise dynamics of the relationship between the two is complex and poorly understood, but they are certainly not antithetical to one another.[6] Therefore, although some criticisms of certain aspects of mainstream environmentalism by subjectionists may be valid, from our vantage point, the narrow subjectionist emphasis on economic welfare is excessive.

Social Justice. Many Protestants would place social justice advocates at the opposite end of the theological spectrum from fundamentalists. The Roman Catholic and mainline Protestant churches have long-standing, laudable traditions of social activism. But in the context of Christian perspectives on environmental issues, social justice alone is another form of strong anthropocentrism. Instead of focusing, as subjectionists do, on human well-being as measurable in a money metric (what we label "economic welfare" in figure 1), social justice advocates emphasize the universal satisfaction of basic human needs such as food, shelter, and clothing. Within the social sciences and philosophy, disagreements between subjectionists and social justice advocates find expression in sometimes vitriolic debates over how best to gauge human well-being (Nussbaum and Sen 1993). Like the subjectionists, social justice advocates believe humans are the part of Creation about which God is principally concerned; nonhuman Creation ("resources") exists to help satisfy those needs.[7]

Unlike the subjectionists, however, social justice advocates often emphasize social action to "redeem" humanity's sinfulness. The relatively recent Catholic tradition of liberation theology (Gutierrez 1973; Boff 1985; Berryman 1987) is an especially energetic expression of this perspective. As a consequence of their activism, social justice advocates sometimes find themselves allied politically with some environmentalists (e.g., environmental justice and eco-justice advocates) in opposing status quo, even though they may disagree whether humanity or the Earth comes first. This alliance is fed by the growing recognition that there exists a vicious cycle of poverty and environmental destruction in contemporary society. Many

important environmental concerns (e.g., biodiversity loss, deforestation, desertification) are associated with excessive exploitation of renewable resources in low-income, tropical countries by the approximately one billion people currently in poverty, particularly in rural areas (Perrings 1989; World Bank 1992; Boyce 1994; Cleaver and Schreiber 1994; Karshenas 1994; Munasinghe and McNeely 1994; Barrett 1995, 1996; Barrett and Arcese 1995). Thus, many social justice advocates are leveraging emerging concerns about environmental degradation to advance an inherently strong anthropocentric agenda. As we argue in the next section, however, it is instead the mutualistic relationship between environmental protection and improved human well-being, whether measured in terms of economic welfare or basic human needs provisioning, that deserves further exploration and emphasis, politically and theologically.

Creation Care. Oelschlaeger (1994)[8] provides a book-length argument for the creation care (or "caring for creation") perspective,[9] some variant of which is articulated in all major world religions. Indeed, of the six movements discussed in this paper, creation care is probably the most congruent with mainstream environmentalism in high-income countries. Creation care is typically associated with the notion of stewardship,[10] which has been defined in a variety of ways, but the essential component is the belief that God designated humans as stewards or guardians over God's Creation, and thus care for all of creation is appropriate and necessary. Nonetheless, most creation care proponents seem to spend most of their energies on the nonhuman components of creation, with little explicit effort aimed at human societal needs. The appeal of this perspective within environmentalism, Christian or otherwise, is broad, though it is not without critics.[11] Creation care traditions are thus centered in the environmental protection sphere of figure 1.

The Christian creation care movement arose soon after White's (1967) criticism of the Church, particularly his charge that Christianity is the most anthropocentric of religions. The primary argument Christian environmentalists use against White (and other critics) is that his (their) interpretations of Scripture are faulty.[12] As a result, there has been a major effort over the past two decades to develop environmental philosophies based on biblical passages that describe the goodness of God's creation and include mandates to care by responsible human stewards.

With this background in mind, it seems reasonable to view creation care as a corrective aimed at reminding the Church of its duties to all of creation instead of to humanity exclusively and indirectly to those parts materially affecting humans.[13] Unfortunately, this approach is often carried to excess by both Christian and non-Christian environmentalists (Grizzle and Cogdill 1993/94; Grizzle 1994). For Christians perhaps the most serious result is that they inadvertently ignore traditional Christian

emphases on spiritual and social justice issues. Moreover, the nexus between poverty and environment goes largely unacknowledged within the creation care movement, sometimes provoking tension between social justice advocates and creation care adherents.

The commonly heard unqualified claim by creation care proponents that all creation is "good" and that humans must therefore protect all components of the environment is theologically equivalent to asserting there is no evil or at least that everything that is not good in the world is purely the product of human behavior. Clearly, God pronounces that creation is "good" repeatedly in Genesis 1. And we in no way intend to trivialize these passages. However, they should not be taken to mean that everything about creation is to be valued and protected and simply declared "good" in an unqualified way. For instance, should we strive to protect the AIDS or Ebola viruses so they do not go extinct? Are all species really equal and "good"? Extreme biocentrists sometimes declare this to be the case. Likewise, should we thank God for sending wildly destructive storms and earthquakes that destroy humans and other creatures and declare them "good" because they are a part of creation? Common sense tells us that creation in its present state is not unequivocally "good." Moreover, many of the insights that ecology has provided into how nature functions reveal a creation that is far from some of the romanticized notions that seem to be widespread among environmentalists (see Nash 1991 for further discussion; see also Grizzle and Cogdill 1993/94 and Grizzle 1994). Very few environmentalists, Christian or otherwise, have satisfactorily confronted the "bad" or harsh side of nature. And few theologians have dealt, to the extent that is needed, with the notion that Jesus came to redeem all of creation in a radical way.[14]

Environmental Justice. Environmental justice is a recent movement with roots in both the creation care and the social justice movements. The United Church of Christ's Commission for Racial Justice issued the landmark statement in this movement (United Church of Christ 1987). Bryant (1995, 6) summarizes environmental (equity and) justice as focusing on "ameliorating potentially life-threatening conditions or on improving the overall quality of life for the indigent or people of color." Environmental justice issues were initially raised in the early 1980s in connection with siting of solid waste facilities (Bullard 1983, 1984). Studies find that lower socioeconomic classes and minorities, in the United States and around the world, tend to be exposed to greater levels of environmental pollution, particularly contaminants from hazardous waste disposal facilities. The result has been a nexus of civil rights, social justice, and environmental protection proponents for the purpose of advocating an equitable distribution of the burdens of environmental hazards and of the fruits of efforts to ameliorate pollution and other forms of environmental degradation.

Some environmental justice proponents explicitly consider their views "holistic." For example, Bryant (1995, 33), referring to the movement as corrective for existing public policy, says, "We need to take a holistic approach if we expect to solve the most pressing social and environmental problems confronting us today." However, many topics central to mainstream environmentalism, like biodiversity, habitat destruction, and endangered species, cannot be found in the environmental justice literature, which is heavily oriented toward the problems of urban and peri-urban slums.

Eco-feminism. Like the environmental justice movement, the eco-feminist movement is not identified principally with the Christian church but nonetheless finds expression through several prominent Christian proponents (McFague 1987; Ruether 1992).[15] The core charge by eco-feminists is the need to shift from a hierarchical view of nature and culture, which leads to problematic dualisms of various sorts but most importantly male domination and devaluation of women and nature, to a view based on equality and holism. This kind of view naturally leads to a creation care perspective, which is a major link to mainstream environmentalism. The eco-feminist critique draws its power from the empirical observation of a relationship between societies in which women are accorded low social status and those in which environmental degradation is especially severe. This observation fuels a challenge to prevailing value systems. Eco-feminists commonly demand explicit consideration of justice issues too often neglected in other quarters of Christian environmentalism. Some eco-feminists also talk of "sin" as a basic human problem that must be addressed, thereby touching upon a major concern of traditional Christian theology that largely has been ignored or only mentioned in a cursory fashion by many other Christian environmentalists.

It does not seem, however, that eco-feminism has received the attention that it needs in order to be fairly assessed and thus more adequately assimilated into Christian (or mainstream) environmentalism. Fowler (1995, 123) suggests that the predominant response in many quarters to eco-feminism has simply been to ignore it. Our particular concern is that in their rush to do away with "hierarchical" thinking and "dualisms" of all kinds, eco-feminists seem to champion an almost blanket notion that all components of creation are equal. Our earlier comments concerning the "goodness" of creation and similar claims of equality by extreme biocentrists apply here as well.

Eco-justice. A rapidly emerging vein of Christian environmental thought takes the label "eco-justice."[16] It was one of the first of the Christian environmental movements (Baer 1966; Anderson 1968), and it has grown rapidly in acceptance in recent years. Eco-justice proponents

explicitly call for both environmental protection ("ecological justice") and social justice, or "ecological health and wholeness together with social and economic justice" (OGAPC 1990, 73).[17] Eco-justice represents the expansion of long-standing concerns by mainline Protestants and Roman Catholics for social justice to include justice for all of God's creation. In a spirit similar to eco-feminists, eco-justice advocates highlight the similarities between the vulnerability of the human poor and of nonhuman creation to the excesses of contemporary, consumerist society. Eco-justice advocates emphasize the oneness of creation (Ps. 24:1; John 17:21–23) and Jesus' commandment to love one another (John 15:17).

These points are captured in the four pillars of the eco-justice movement: sustainability, participation, sufficiency, and community. According to this view, as articulated in OGAPC (1990), natural and social systems must be able to thrive together indefinitely; all persons must have a fulfilling place in those systems and must work to tame consumptive excesses and to emphasize the unity of all creation through the triune God.

Among Christian environmentalists, proponents of eco-justice have attempted to forge what we consider the most comprehensive of environmental philosophies. Hence, the movement is placed closest to the central region of intersection in figure 1. Indeed, many eco-justice people would probably argue that their efforts do in fact strongly consider the economics sphere and thus belong in the centermost region (Nash 1996). Perhaps —although we sense that many eco-justice advocates have reduced the difficult task of caring for humankind to the satisfaction of basic human needs. Yet Jesus directed us not only to show special care for the least among us—a preferential option for the poor in contemporary theological terms—but also to grow the economic resources given to us in a wise fashion (Matt. 25:14–29).[18] Social scientists, philosophers, and theologians have struggled in vain to find some unidimensional representation of human welfare (Nussbaum and Sen 1993). We don't believe the exclusive orientation on poverty reduction provides a truly holistic vision; it neglects the legitimate aspirations of most of humanity. Christ calls us to show a preferential option for the poor, not an exclusive one. Just as Jesus called tax collectors his friends and just as the Gospels celebrate the wealthy Joseph of Arimathea's care for Jesus on Good Friday, so must Christians show compassion toward all persons and things, not just the vulnerable.

Moreover, our major complaint with the eco-justice movement is that it slights the spiritual dimension, particularly the role of evangelization. To be fair, this has long been a point of contention among mainline and evangelical Christians: What should be included in the process of evangelism? Eco-justice advocates clearly have a different, and we believe narrower, understanding of spirituality than we do. For

example, one of the principal eco-justice declarations states: "By definition, eco-justice is part of evangelism. . . . Working to save our rich natural resources and securing a more just distribution of these resources is a work of evangelism" (OGAPC 1990, 87). We don't question the need to save natural resources. However, we fear, as Erickson (1994, 46) has stated, that "evangelism has been twisted to mean preaching eco-justice rather than saving souls."

Cosmocentrism and Pluralistic Stewardship

In the previous sections, we discussed the major emphases of each Christian response to the environmental movement and noted what we perceive as deficiencies in each. In this section, we synthesize the major contributions of each movement into what we consider to be a holistic Christian environmentalism. It is our contention that, when considered collectively, the six major Christian responses described in the previous section represent an extremely robust kind of environmentalism capable of providing a spiritual and intellectual base sufficient to support public policy and private action that can successfully address environmental problems. Ours is by definition a pluralistic approach wherein each of the perspectives outlined earlier is accorded a measure of deserved respect but not to the exclusion of the others. Like Norton (1995), we see monistic approaches to environmental ethics and spirituality—"the view that a single theory suffices to support a uniquely correct moral judgment in every situation" (Norton 1995, 342)—as ultimately ineffective and impractical.

Pluralistic stewardship recognizes that there exist multiple principles that must guide environmental protection. None can rightly be elevated above the others. Rather, society must search for and implement patterns of individual and collective behavior that satisfy each of the core principles. This is depicted graphically as the central area of intersection in figure 1. A major goal of this kind of pluralism is the elimination of what might be called "false dichotomies" such as setting up anthropocentrists generally against biocentrists in "either/or" positions requiring total rejection of one or the other. Such false dichotomies lead to polarization, not progress. Instead, there must be a search for common ground. All who call themselves environmentalists need to be more ecumenical in their dialogue instead of arguing to win over everyone else to a particular perspective. Such a process of integration requires a commitment to dialogue, compassion, mutual respect, and humility on the part of individuals and, at the institutional level, a system of checks and balances on the multiple viewpoints to ensure that mutually acceptable positions are found.

Pluralistic stewardship may be embraced by those with a variety of underlying worldviews or lower-level perspectives. Our view is based on a

perspective that we term "cosmocentrism," which bears some resemblance to "weak" anthropocentrism, a systemic approach that pays special attention to the complexity of human-nature relations and ascribes intrinsic value to nonhuman elements of God's creation.[19] Environmental ethicists generally can be divided into anthropocentrist and nonanthropocentrist camps, with the latter seemingly dominating contemporary secular environmentalism. Like several prominent anthropocentric environmental ethicists (Shrader-Frechette 1981; Sagoff 1988; Norton 1991, 1995), we believe some anthropocentric approaches to moral philosophy can accommodate environmental concerns. However, we also share the concerns of those who feel that strong (or "extreme," or "severe") anthropocentrism, wherein only humans have intrinsic value and only human needs and wants are important, is deeply flawed and should be resisted. Our cosmocentrism places ultimate value on the integrated whole of creation, wherein we occupy a privileged place of authority because we are the most important of God's creatures. Yet cosmocentrism treats humans as fallible creatures having complex relations with the other components of creation that also possess intrinsic value (see note 19).

In the Venn diagram in figure 1, pluralistic stewardship is thus an operational ethic that attends to the legitimate concerns of humanity, as manifest in both advances in economic welfare and the satisfaction of basic human needs, and to the pressing needs of the nonhuman, biophysical environment. Some may mistake this as a call to serve many masters, against Jesus' warnings (Matt. 7:24). But because "the earth is the Lord's and all the fullness thereof, the world and those who dwell therein" (Ps. 24:1 RSV), this approach fosters service to God by mandating attention to all of God's creation. Thus, our cosmocentric view is based on an overarching theocentrist perspective. Perhaps if we were without sin, we could articulate and follow a single ultimate principle guiding global stewardship. But because of our fallibility, we humans reflect different, narrow visions of stewardship—hence the need for a pluralistic approach, which gives voice to all and offers a check on both the pantheistic excesses of contemporary environmentalism, including some Christian variants thereof, and the unsustainable exploitation encouraged by traditional, strong anthropocentrism of the sort attacked by White (1967).

In addition to explicitly Christian perspectives, the practice of pluralistic stewardship founded on the value system we identify as cosmocentrism also synthesizes the core beliefs of (at least moderate versions of) biocentrism, ecocentrism, and anthropocentrism (Barrett and Grizzle 1998). We consider all individual species to have "inherent value" as do biocentrists (Regan 1983; Taylor 1986). This view, for the Christian, reflects the notion that all of creation gives glory to God and may emphasize the relational status of creation to its Creator and sustainer. As Hill

(1991, 170) states, "Nature serves something beyond human purposes and as such must be respected and honored." Furthermore, we consider all collections of individuals as well as the physicochemical environment to have moral standing and value, as do ecocentrists (Callicott 1987; Rolston 1988). We also believe that humans are made in God's image and enthroned by God as stewards of all creation (Hall 1986). God entrusted humanity with dominion over the earth not to satisfy our own desires but to give glory to God. This point about the stewardship responsibilities of dominion has been well developed in much of the post-White Christian environmental literature. Humankind is both within and above the broader ecosystem. God accords humanity awesome power over the rest of nature, but this privileged place in creation brings with it disproportionate responsibilities (Luke 12:48). Moreover, because we sin (environmental destruction is but one manifestation), we must act humbly. There is no getting around the practical fact that environmental protection is anthropocentric in execution, if not in valuation, but that should not make stewardship self-serving. These multiple, reconcilable beliefs lead us to label as "pluralistic stewardship" an approach to environmental ethics and spirituality that emphasizes human authority over and responsibility to nature—neither to protect nature nor to enrich or sustain humans as moral ends in themselves but to balance these sometimes competing objectives as a means to glorify God.

Christians have a particularly heavy burden to bear in this respect. The Scriptures teach that Christians are called to be priests, prophets, kings, and servants. As priests, Christians are called on to intermediate between God and all creation, human and nonhuman.[20] This vests us with authority, although it does not make us superior to the rest of creation. Our priesthood also emphasizes that we minister to God's creation. God is the owner of all, not we, so an arrogant approach to nature is inappropriate (Hill 1991; Barrett 1996). As prophets, Christians must identify sin and caution neighbors about the consequences of a failure to repent. This is a call to activism and to learning. Applied to environmental concerns, the Christian role of prophet necessitates articulation of an environmental ethic, a commitment to seeking and promoting truth, and recognition of personal and collective responsibility for the sinfulness of human desecration of God's creation. As kings, Christians must be wise and just rulers, like Solomon. This demands critical scientific inquiry and dispassionate dialogue and analysis. As servants, Christians are called to serve the Creator by serving God's creation.

Foundational to Christianity is the notion that God sent Jesus to show humans how the Lord of all loves all creation and all sinners while nonetheless despising sin and evil. Humanity is capable of redemptive rule over itself and over the rest of creation if only we follow Jesus' instruction. To

Jesus, greatness meant servanthood, as evidenced in the foot washing (John 13:3–10), in his instructions to his disciples at the last supper that the great serve the rest (Luke 22:24–27), and above all in the Crucifixion. Christian baptism places us at the center of creation, bestowing upon us unparalleled earthly authority that brings with it responsibilities to learn, to repent, to minister, to restore, and to serve.

A detailed and practical synthesis of these beliefs will be a major challenge for ethicists and theologians, not to mention for environmental policymakers, and it certainly exceeds our ambitions in this paper. When one considers the undistinguished history of human humility, the prospects may look bleak. Nonetheless, we contend that this is the challenge that must be met if environmentalism is to succeed in adequately protecting the earth that provides our sustenance and that of the rest of God's creation. With God's grace the challenge can be met.

We close this section with a brief attempt at a more explicit synthesis of the six Christian perspectives discussed earlier. We believe each makes important contributions to the one body of Christian environmentalism. Elsewhere we have outlined initial steps as to how environmental policies and the debates surrounding those policies can be guided by a pluralistic stewardship approach (Barrett and Grizzle 1998). Here we focus on the Christian perspective of pluralistic stewardship.

Subjectionism contributes important emphases on the instrumental value of nonhuman creation as means to assure and advance the welfare of humans crafted in God's own image. It particularly emphasizes the prerequisite of more fundamental spiritual reawakening if humanity is to repent from sin, including its environmental manifestations. Social justice advocates add the crucial reminder that the advance of human welfare must include a preferential option for the poor and that individuals are obliged to act on their beliefs (James 2:18). The creation care perspective contributes recognition of the intrinsic value of all God's creation. The environmental justice, eco-feminism, and eco-justice movements offer creative efforts to combine attention to social justice and environmental protection through an emphasis on the inherent unity of all humankind and, more broadly, all creation in God. In this view, sin against God can be manifested in one's relationship to other people or to the nonhuman elements of God's creation.

A holistic Christian environmentalism confirms all of the above. In particular, pluralistic stewardship emphasizes environmental protection as but one obligation of the human community God places at the center of creation. Perhaps the most important departure of our approach from most existing Christian environmental traditions is its explicit recognition of the pervasive need for radical redemption of all creation, not just humanity (Rom. 8; Col. 1 RSV). We thus reject the overly romantic

notions so commonly espoused by both mainstream and Christian environmentalists. Although we concur with most Christian environmentalists that humanity has an important role to play in the redemptive process through acts of service, penitence, love, and mercy as well as through faith, hope, and prayer, we believe the fundamental redemption that only Christ can provide needs to be more seriously considered.

Closely related to the possibility of redemption is the Christian concept of love, for redemption comes only through God's loving grace.[21] God is love, and God loves all of creation, regardless of imperfections. "For God so loved the world [Greek transliteration: cosmos] that He gave His only Son, that whoever believes in Him should not perish but have everlasting life" (John 3:16 RSV). God sent Christ to redeem a fallen cosmos, creation in its entirety, not just humankind. In light of such love and sacrifice, all of creation certainly has inherent value despite ubiquitous imperfection. Finally, related to love is justice. God calls us to love all His creation and so to honor the goodness in both persons and things through justice and kindness.

In sum, these considerations lead to an explicit, uniform concern for all three spheres in the model depicted in figure 1: environmental protection, human needs (social justice), and economic welfare. The most holistic and sustainable approaches (Barrett and Grizzle 1998) are those nearest the center, where the concerns of all three spheres are adequately and appropriately met. The trick is to achieve a proper balance.

We believe the challenge will be to break from the intellectual and spiritual constraints that adherence to any particular school of thought (whether in Christian environmentalism or otherwise) imposes, in order to forge a holistic environmentalism adequate to the complexity of the problems we currently face. There are nonetheless a few encouraging signs that some are making this necessary break. First, there is a growing awareness by mainstream environmentalists that it will be essential for religious communities to join in the overall effort of solving our environmental problems.[22] In the United States, Christianity predominates, heavily influencing individual and collective values (Gallup and Jones 1989). Thus, regardless of historical antipathies, Christianity has much to offer environmentalism, and vice versa. Second, scientists, theologians and laypeople increasingly recognize the inextricability of meeting basic human needs, advancing economic welfare, and environmental protection (Kaplan 1994; Nickel and Viola 1994; O'Riordan 1995; Hessel 1996; Barrett 1996). Finally, the increasing globalization of both environmentalism and Christianity more closely links Christian environmentalists of the high-income nations with those of the low-income countries. Commentators and policymakers in certain low-income nations of the tropics have long recognized the inextricability of human needs, economic

welfare, and environmental protection. Moreover, religious faith has not been divorced from science and public policy in these areas nearly to the extent evident in industrialized nations. Environmental movements in low-income countries tend to have a religious core, sometimes based on traditional (polytheistic) beliefs. Moreover, other major religions (e.g., Buddhism, Islam) do not separate religion and science or human and nonhuman creation the same way as contemporary Christians in industrialized places (Wersal 1995). While it should be anticipated that many people will remain pious to narrower visions of Christian environmentalism, we think it essential that the many parts of the one body begin to communicate and to work together, and we are encouraged by tangible movements in this direction, although we are by no means satisfied by the depth or breadth of such movement to date.

Conclusion

For the body does not consist of one member but of many. If the foot should say, "Because I am not a hand, I do not belong to the body," that would not make it any less a part of the body. And if the ear should say, "Because I am not an eye, I do not belong to the body," that would not make it any less a part of the body. If the whole body were an eye, where would be the hearing? If the whole body were an ear, where would be the sense of smell? But as it is, God arranged the organs in the body, each one of them, as he chose. If all were a single organ, where would the body be? As it is, there are many parts, yet one body. The eye cannot say to the hand, "I have no need of you," nor again the head to the feet, "I have no need of you." On the contrary, the parts of the body which seem to be weaker are indispensable, and those parts of the body which we think less honorable we invest with the greater honor, and our unpresentable parts are treated with greater modesty, which our more presentable parts do not require. But God has so composed the body, giving the greater honor to the inferior part, that there may be no discord in the body, but that the members may have the same care for one another. If one member suffers, all suffer together; if one member is honored, all rejoice together. (1 Cor. 12:14–26 RSV)

As the contemporary environmental movement has grown and evolved, so have several distinct traditions of Christian thought on humanity's place in, and responsibilities with respect to, God's creation. In this paper, we have identified the key concerns and beliefs underpinning distinct traditions not so much to provide a complete characterization of each, which we surely fail to do, but rather to inform a more encompassing vision of the one body of Christian environmentalism. We label this attempt a pluralistic stewardship approach. Each of the many parts has an important role in the necessarily pluralistic endeavor of caring for the whole of God's creation, but the whole is greater than the sum of its parts. We are not so naive as to believe that sin will not always lead to sometimes bitter partisanship by one or several parts of the body. Regrettably, there will always be discord within the body. Yet the sincere concerns of each part for the

protection of one or more elements of God's creation are inherently synergistic. A holistic Christian environmentalism can be a light unto the world, helping to tame the excesses of narrow secular and religious movements.

While the Christian response to environmental issues has been diverse (and robust when considered collectively), the one body of Christian environmentalism is lacking one major part (an "organ system," in anatomical terms) critical to its proper functioning. It lacks a nervous system that provides communication among all body parts and thus optimal functioning of the body as a whole. As we read the literature on social and environmental issues and as we speak with friends, clergy, and fellow congregants, we are struck by the degree to which Christians fail to communicate clearly with one another on these issues central to mortal existence. Moreover, lack of communication often begets disrespect. We are not the first to point out this problem, and there are clear signs that such communication is emerging.[23] Pope Paul VI (1965) eloquently argued that the true Church is dialogical,[24] that no one party has all the answers, that all must be willing to listen to and work with others. Our hope is that, by articulating a holistic Christian environmentalism founded on core beliefs from disparate traditions, this paper will call Christian environmentalists to communicate more frequently and openly and to become evangelists in the secular world for our collective message. Moreover, the inevitable tensions among distinctly Christian and secular approaches can be healthy and stimulative. Ideally, science and religion reinforce and check each other in complementary fashion in the pluralistic settings typical of debate on environmental issues.

NOTES

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1. A major distinction between basic human needs provision and economic welfare is that the former pays considerable attention to distributional questions, i.e., the human condition at a disaggregated level, while the latter emphasizes aggregate output and productivity, i.e., the human condition at an aggregate level. The latter concept, despite its common currency in the language of national accounting (e.g., gross domestic product) suffers from the lack of a commonly agreed upon approach to weighting individuals' values in constructing the aggregate measures. Also see note 3 and the discussion of subjectionism and social justice movements.

2. Ours extends Norton's (1991) two-compartment model, with which he represents the way environmental issues are approached in industrialized countries, where typically only environmental protection and economics are considered. Norton collapses all socioeconomic issues, including what we label as *basic human needs* and others sometimes call *human rights*, into the "economics" compartment. We think the distinction (see note 1), however, is important.

3. Defining *human needs* is itself a considerable task. Following the basic human needs literature of the 1970s and early 1980s (Streeten et al. 1981), we define human needs as universally adequate standards of nutrition, health, shelter, water, sanitation, and education. Our use of the term *human needs* also is congruent with many treatments of "human rights" (e.g., Nickel and Viola 1994).
4. RSV stands for Revised Standard Version. This and all subsequent scriptural references are drawn from the *New Oxford Annotated Bible, Revised Standard Version*.
5. Christian subjectionist critics that emphasize economic aspects include Beisner (1990) and Burkett (1993). All three complaints are discussed in detail by Wright (1995).
6. Well-known recent examples of economists' attempts to map the relationships between economic welfare and environmental protection include World Bank (1992), Antle and Heidebrink (1995), and Grossman and Krueger (1995).
7. Bush (1993) reviews this worldview, as does Neuhaus (1971). See Bakken et al. (1995) for a brief but interesting discussion of the social justice resistance within contemporary mainline Protestantism. Also, see Derr et al. (1996) for a collection of essays, including Nash's strongly critical view of extreme humanistic perspectives.
8. Oelschlaeger has been a part of mainstream environmentalism for most of its existence and as such had been a critic of Christianity. In his book he explains his "conversion" to the importance of religion in moving us to change our ways in order to save the earth and argues the creation care perspective will be the key.
9. Among Christians, this perspective includes Roman Catholics (Pope John Paul II 1987, 1990), and many mainline Protestant groups, but it has been developed in most detail by an active cadre of evangelicals (Schaeffer 1970, Wilkinson 1980, 1991, Squiers 1982, DeWitt 1991, 1994, Van Dyke et al. 1996). It can be argued that creation care perspectives of some kind almost by definition are a part of all forms of environmentalism. We concur, but the actual term has been most closely associated with stewardship (see note 10).
10. The term *stewardship* is widely used and not always to represent similar thought traditions. Many "creation care" adherents identify their movement with the term, but so too does the recent Episcopalian "environmental stewardship" movement, which we identify as falling into the "eco-justice" tradition.
11. See Fowler (1995) for a succinct review of the stewardship movement.
12. Schaeffer (1970) and Barnette (1972) offer two of the earliest major evangelical responses.
13. Cal DeWitt, a leading evangelical in the stewardship movement, has indicated (personal communication, March 1996) that his personal view of the movement is along this line.
14. Important exceptions to this conclusion include Moltmann (1986), Nash (1991), and Rolston (1994), who offer insightful discussion of an imperfect creation and the need for radical redemption through Christ, which is related to but certainly not the same as the "redemption" humans can offer by our efforts.
15. See Fowler (1995) for a brief review of Christian eco-feminism.
16. Labeling is difficult here. We use the term *eco-justice* as an umbrella for many Christian movements, including some that do not identify themselves by that term (e.g., the Episcopal Church's environmental stewardship movement).
17. Bakken et al. (1995) offer an informative introductory essay on the eco-justice movement.
18. Recall that the talents in the parable were a currency in Jesus' time.
19. "Cosmocentrism" is an integrative or holistic perspective that speaks directly to the relationship between God and creation (John 3:16). Cosmocentrism attaches intrinsic value to the natural world, humankind included, because of its creation and its relational status to its creator. It simultaneously recognizes humankind's unique authority over and responsibility for the whole of God's creation. Because of humanity's special agency for creation, the incentives and information facing people become central to the task of stewardship. Cosmocentrism thus seems most consistent with approaches such as those of Norton (1984), Hargrove (1989), Nash (1991), and Ferré (1993).
20. Clapp (1996) recently proposed the term *priestly stewardship* for evangelicals to consider as the appropriate descriptor for Christian environmentalism.
21. Nash (1991) and Hefner (1994) have dealt with the Christian concept of love as foundational for development of an environmental ethic.
22. Perhaps the most important bridge-building effort thus far has been the letter published by the late Carl Sagan (1990) and signed by ten leading scientists calling for a "joint commitment in science and religion" to work on our problems. Largely as a result of this call, the National Religious Partnership for the Environment was formed to provide educational and other materials designed to engage local congregations in environmental issues.

23. For example, see Sheldon (1992, xv). The multidenominational and multidisciplinary National Religious Partnership for the Environment and the Global Stewardship Initiative of the Pew Charitable Trusts, which helped support this work, are prominent examples of movements to foster communication. Hessel (1996) is aimed particularly at theological education.
24. See Heie (1996) for a similar call to evangelicals.

REFERENCES

Anderson, R. 1968. "An Ecological Conscience for America." *Social Action* 35:5–20.

Antle, J. M., and G. Heidebrink. 1995. "Environment and Development: Theory and International Evidence." *Economic Development and Cultural Change* 43:605–25.

Baer, R. A. Jr. 1966. "Land Misuse: A Theological Concern." *Christian Century* 83: 1239–41.

Bakken, P. W., J. G. Engel, and J. R. Engel. 1995. *Ecology, Justice, and Christian Faith.* Westport, Conn.: Greenwood Press.

Barnette, H. 1972. *The Church and the Ecological Crisis*. Grand Rapids, Mich.: Eerdmans.

Barrett, C. B. 1995. "Stewardship and the Welfare Economics of Sustainable Development." In *The Christian Mandate for Global Stewardship*, eds. R. Wright and H. Heie. Wenham, Mass.: Center for Christian Studies.

_____. 1996. "Fairness, Stewardship and Sustainable Development." *Ecological Economics* 19, no. 1:11–17.

Barrett, C. B., and P. Arcese. 1995. "Are Integrated Conservation-Development Projects (ICDPs) Sustainable? On the Conservation of Large Mammals in Sub-Saharan Africa." *World Development* 23:1073–84.

Barrett, C. B., and R.E. Grizzle. 1998. "A Holistic Approach to Sustainability Based on Cosmocentric Pluralism." *Environmental Ethics*. In press.

Beisner, E. C. 1990. *Prospects for Growth*. Westchester, Ill.: Crossway Books.

Berryman, P. 1987. *Liberation Theology.* New York: Pantheon.

Boff, L. 1985. *Church: Charism and Power.* London: SCM Press.

Boyce, J. K. 1994. "Toward a Political Economy of Environmental Degradation and Sustainable Development." Univ. of Wisconsin—Madison Global Studies Research Program working paper 12.

Bryant, B., ed. 1995. *Environmental Justice: Issues, Policies, and Solutions*. Washington, D.C.: Island Press.

Bullard, R. D. 1983. "Solid Waste Sites and the Black Houston Community." *Sociological Inquiry* 53:273–88.

_____. 1984. "Endangered Environs: The Price of Unplanned Growth in Boomtown Houston." *California Sociologist* 7:85–101.

Burkett, L. 1993. *What Ever Happened to the American Dream*? Chicago: Moody Press.

Bush, J. E. Jr. 1993. "Social Justice and the Natural Environment in the Study Program of the World Council of Churches, 1966–1990." Ph.D. diss. Drew Univ., Madison, N.J.

Callicott, J. B. 1987. *Companion to a Sand County Almanac: Interpretive and Critical Essays*. Madison: Univ. of Wisconsin Press.

Chiras, D. D. 1992. "An Inquiry into the Root Causes of the Environmental Crisis." *Environmental Carcinogens and Ecotoxicology Reviews* C10, no. 1:73–119.

Clapp, R. 1996. "Why the Devil Takes VISA: A Christian Response to the Triumph of Consumerism." *Christianity Today*, 7 October: 19–33.

Cleaver, K. M., and G. A. Schreiber. 1994. *Reversing the Spiral: The Population, Agriculture, and Environment Nexus in Sub-Saharan Africa*. Washington, D.C.: World Bank.

Cobb, J. B. Jr. 1992. *Sustainability.* Maryknoll, N.Y.: Orbis Books.

Commoner, B. 1971. *The Closing Circle*. New York: Knopf.

Cowell, C. M. 1993. "Ecological Restoration and Environmental Ethics." *Environmental Ethics* 15:19–32.

Derr, T. S., with J. A. Nash and R. J. Neuhaus. 1996. *Environmental Ethics and Christian Humanism*. Nashville, Tenn.: Abingdon Press.

DeWitt, C. B., ed. 1991. *The Environment and the Christian: What Does the New Testament Say about the Environment?* Grand Rapids, Mich.: Baker Books.
_____. 1994. *Earthwise*. Grand Rapids, Mich.: CRC Publications.
Erickson, L. E. 1994. "Recent Economic Positions of the Protestant Churches." *Bulletin of the Association of Christian Economists* 24:40–53.
Ferré, F. 1993. "Persons in Nature: Toward an Applicable and Unified Environmental Ethics." *Zygon: Journal of Religion and Science* 28 (December): 441–53.
Fowler, R. B. 1995. *The Greening of Protestant Thought*. Chapel Hill: Univ. of North Carolina Press.
Gallup, G. H. Jr., and S. Jones. 1989. *One Hundred Questions and Answers: Religion in America*. Princeton, N.J.: Princeton Religion Research Center.
Grizzle, R. E. 1994. "Environmentalism Should Include Human Ecological Needs." *BioScience* 44:263–68.
Grizzle, R. E., and M. Cogdill. 1993/94. "Subduing the Earth While Tending the Garden: A Proposal for a More Balanced Environmental Ethic." *Faculty Dialogue* 20:73–81.
Grossman, G. M., and A. B. Krueger. 1995. "Economic Growth and the Environment." *Quarterly Journal of Economics* 102:353–77.
Gutierrez, G. 1973. *A Theology of Liberation*. Maryknoll, N.Y.: Orbis Books.
Hall, D. J. 1986. *Imaging God: Dominion as Stewardship*. Grand Rapids, Mich.: Eerdmans.
Hargrove, E. C. 1989. *Foundations of Environmental Ethics*. Englewood Cliffs, N.J.: Prentice-Hall.
Hefner, P. 1994. "Can Nature Truly Be Our Friend?" *Zygon: Journal of Religion and Science* 29 (December): 507–28.
Heie, H. 1996. "The Postmodern Opportunity: Christians in the Academy." *Christian Scholar's Review* (Winter): 138–57.
Hessel, D. T., ed. 1996. *Theology for Earth Community: A Field Guide*. Maryknoll, N.Y.: Orbis Books.
Hill, P. J. 1991. "Biblical Principles Applied to a Natural Resources/Environment Policy." In *Biblical Principles and Public Policy: The Practice*, ed. R. C. Chewining. Colorado Springs, Colo.: Navpress.
Kaplan, R. D. 1994. "The Coming Anarchy." *Atlantic Monthly* (February): 44–76.
Karshenas, M. 1994. "Environment, Technology and Employment: Towards a New Definition of Sustainable Development." *Development and Change* 25:723–56.
McFague, S. 1987. *Models of God: Theology for an Ecological, Nuclear Age*. Philadelphia: Fortress Press.
Moltmann, J. 1986. *God in Creation*. Philadelphia: Fortress Press
Munasinghe, M., and J. A. McNeely, eds. 1994. *Protected Area Economics and Policy: Linking Conservation and Sustainable Development*. Washington, D.C.: IUCN and World Bank.
Nash, J. A. 1991. *Loving Nature: Ecological Integrity and Christian Responsibility*. Nashville, Tenn.: Abingdon Press, in cooperation with The Churches' Center for Theology and Public Policy, Washington, D.C.
_____. 1996. "Population, Consumption, and the Environment." Paper presented at conference on "Women, Poverty, and Population: A Call to Engagement for People of Faith," 10 February, sponsored by The Center for Development and Population Activities.
Neuhaus, R. J. 1971. *In Defense of People: Ecology and the Seduction of Radicalism*. New York: Macmillan.
Nickel, J. W., and E. Viola. 1994. "Integrating Environmentalism and Human Rights." *Environmental Ethics* 16:265–73.
Norton, B. G. 1984. "Environmental Ethics and Weak Anthropocentrism." *Environmental Ethics* 6:131–48.
_____. 1991. *Toward Unity among Environmentalists*. Oxford: Oxford Univ. Press.
_____. 1995. "Why I Am Not a Nonanthropocentrist: Callicott and the Failure of Monistic Inherentism." *Environmental Ethics* 17:341–58.
Nussbaum, M. C., and A. Sen, eds. 1993. *The Quality of Life*. Oxford, England: Clarendon Press.

Oelschlaeger, M. 1994. *Caring for Creation: An Ecumenical Approach to the Environmental Crisis*. New Haven, Conn.: Yale Univ. Press.
Office of the General Assembly, The Presbyterian Church (U.S.A.). 1990. *Restoring Creation for Ecology and Justice*. Louisville, Ky.: Presbyterian Church (U.S.A.).
O'Riordan, T. 1995. "Frameworks for Choice: Core Beliefs and the Environment." *Environment* 37, no. 8:4–9; 25–29.
Perrings, C. 1989. "An Optimal Path to Extinction? Poverty and Resource Degradation in the Open Agrarian Economy." *Journal of Development Economics* 30:1–24.
Pope John Paul II. 1987. *Encyclical Letter Sollicitudo Rei Socialis: For the Twentieth Anniversary of Populorum Progressio*. Vatican City: Libreria Editrice Vaticana.
_____. 1990. *Peace with God the Creator, Peace with All of Creation*. Vatican City: Libreria Editrice Vaticana.
Pope Paul VI. 1965. *Encyclical Letter Ecclesiam Suam (His Church)*. Vatican City: Libreria Editrice Vaticana.
Regan, T. 1983. *The Case for Animal Rights*. Berkeley: Univ. of California Press.
Rolston, H., III. 1988. *Environmental Ethics: Duties to and Values in the Natural World.* Philadelphia: Temple Univ. Press.
_____. 1994. "Does Nature Need to Be Redeemed?" *Zygon: Journal of Religion and Science* 29 (June): 205–29.
Ruether, R. R. 1992. *Gaia and God: An Ecofeminist Theology of Earth Healing*. New York: HarperCollins.
Sagan, C. 1990. Guest Comment: "Preserving and Cherishing the Earth—An Appeal for Joint Commitment in Science and Religion." *American Journal of Physics* 58, no. 7:615.
Sagoff, M. 1988. *The Economy of the Earth: Philosophy, Law, and the Environment*. Cambridge: Cambridge Univ. Press.
Schaeffer, F. A. 1970. *Pollution and the Death of Man: The Christian View of Ecology.* Wheaton, Ill.: Tyndale House.
Sheldon, J. K. 1992. *Rediscovery of Creation: A Bibliographical Study of the Church's Response to the Environmental Crisis*. Metuchen, N.J.: Scarecrow Press.
Shrader-Frechette, K. S. 1981. *Environmental Ethics*. Pacific Grove, Calif.: Boxwood Press.
Squiers, E. R., ed. 1982. *The Environmental Crisis: The Ethical Dilemma*. Mancelona, Mich.: AuSable Trails Institute of Environmental Studies.
Streeten, P., with S. J. Burki; M. Ul Haq; N. Hicks; and F. Stewart. 1981. *First Things First: Meeting Basic Human Needs in Developing Countries*. Oxford: Oxford Univ. Press.
Taylor, P. W. 1986. *Respect for Nature: A Theory of Envrionmental Ethics*. Princeton, N.J.: Princeton Univ. Press.
United Church of Christ. 1987. *Toxic Wastes and Race in the United States: A National Report on the Racial and Socio-economic Characteristics of Communities Surrounding Hazardous Waste Sites*. United Church of Christ Commission for Racial Justice. New York: UCC.
Van Dyke, F.; D. C. Mahan; J. K. Sheldon; and R. H. Brand. 1996. *Redeeming Creation: The Biblical Basis for Environmental Stewardship*. Downers Grove, Ill.: InterVarsity Press.
Wersal, L. 1995. "Islam and Environmental Ethics: Tradition Responds to Contemporary Challenges." *Zygon: Journal of Religion and Science* 30(June): 451–59.
White, L. Jr. 1967. "The Historical Roots of Our Ecologic Crisis." *Science* 155:1203–7.
Wilkinson, L., ed. 1980. *Earthkeeping: Christian Stewardship of Natural Resources*. Grand Rapids, Mich.: Eerdmans.
_____. 1991. *Earthkeeping in the '90s: Stewardship of Creation*. Grand Rapids, Mich.: Eerdmans.
World Bank. 1992. *World Development Report 1992*. Oxford: Oxford Univ. Press.
Wright, R. T. 1995. "Tearing Down the Green: Environmental Backlash in the Evangelical Subculture." *Perspectives on Science and Christian Faith* 47:80–91.