

HOW MUCH IS GOD WORTH?

THE PROBLEMS — ECONOMIC AND THEOLOGICAL — OF EXISTENCE VALUE

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EXECUTIVE SUMMARY

Economics has traditionally put a value only on goods and services that are directly consumed. However, in 1967 John Krutilla proposed that economists should also assign a value to the knowledge that a particular wilderness, endangered species or other object in nature exists. By the 1980s, the concept of “existence value” was coming into use by a number of economists for purposes such as estimating the benefits of government actions or calculating damage assessments against corporations whose actions had harmed the environment. In 1993, a panel of leading economists convened by the National Oceanographic and Atmospheric Administration declared that, although great care must be exercised to prevent misuse, existence value should be incorporated into the set of economic tools available to government analysts.

Other leading economists have argued that the concept of existence value is inconsistent with accepted economic theory and in practice will often yield implausible results. The number of features existing in the world about which at least some people will have strong feelings is virtually limitless. Yet, most estimates of existence value have addressed only a select few objects in nature.

The attitude of a person with respect to a state of the world will be greatly influenced by the cultural lens applied. In many cases, that lens will be religious. The values placed on wilderness and endangered species reflect the important role these objects have in environmental religion. The sources of environmental religion are found in figures such as David Brower and John Muir and in New England transcendentalism. The transcendentalists in turn drew heavily on the faith of their Puritan forbearers.

What inspires faith for one person may be regarded by another as a diversion from the true faith. Proponents of wilderness look to these areas as a place of spiritual inspiration. Others, however, see the preservation of wilderness as a waste of good resources and a symbolic assault on the value system of belief in economic progress. The latter group will perceive a “negative existence value” in the creation of a wilderness. It is misguided for society to apply formal methods of economic valuation to try to resolve such claims of competing religious groups.

In summary, a fundamental problem with existence value is that in many cases it attempts to answer a religious question with an economic method. Making estimates of the existence value of an object in nature is then both as silly and as meaningless as asking how much God is worth. Economists should abandon the use of existence value and concentrate their scarce resources on more useful projects that are in fact suited to their analytical tools.

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INTRODUCTION

In *Encounters with the Archdruid*, John McPhee relates a discussion with David Brower, regarded by McPhee and many others as the leading environmentalist of our time. Brower is talking about the real meaning of wilderness. He notes that “I have a friend named Garrett Hardin, who wears leg braces. I have heard him say that he would not want to come to a place like this by road, and that it is enough for him just to know that these mountains exist as they are, and he hopes that they will be like this in the future.” As Brower said of his own views, “I believe in wilderness for itself alone.”¹

Economics as traditionally practiced, however, finds it difficult to accommodate this perspective on the world.² Human beings, the way of thinking of economics assumes, live for happiness. Happiness is, moreover, a product of consumption. As economist Stanley Lebergott writes, “the goal of every economy is to provide consumption. So economists of all persuasions have agreed, from Smith and Mill to Keynes, Tobin, and Becker.”³ Historically, there has been little or no place in economic thinking for the idea that something that is never seen, touched or otherwise experienced — that is not consumed in any direct way — can have a value to an individual.

Yet, as McPhee’s discussions with Brower indicated, this economic way of thinking was deeply at odds with an emerging environmental awareness that in the 1960s and 1970s was spreading widely in American society. Economists, it appeared, might be faced with an awkward choice: either reject their own economic perspective on the world or find themselves disagreeing with a powerful new social movement. It is also probably fair to say that some economists were themselves drawn personally to the environmental values that were difficult to express in a conventional economic way. For them, the potential dilemma was also internal: either limit their own commitment to certain environmental goals such as the intrinsic importance of wilderness and endangered species preservation or reject the economic way of thinking in an important area of their life.

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However, in a famous 1967 article in the *American Economic Review*, John Krutilla proposed a reconciliation.⁴ Krutilla suggested that the scope of economics should be expanded to include a new concept, which has since come to be known as “existence value.” The enjoyments of life need not be limited to things that can be seen and touched. Consumption, even as economists think about it, should extend as well to the simple fact of knowing that a wilderness, endangered species or other object in nature exists. Formally, the variables in a person’s “utility function” would not only include the amounts of food, clothing and other ordinary goods and services consumed, but also the various states of knowledge that each person has of the existence of social and physical characteristics present in the world. Implicitly at least, consumers would be willing to pay something for this form of consumption, thus giving rise to efforts by economists to estimate existence values in dollar terms.⁵

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By the 1980s, the concept of existence value was coming into use by a number of economists for purposes such as estimating the benefits of government actions or calculating damage assessments against corporations whose actions had harmed the environment.⁶ A federal appeals court in 1989 directed the Department of the Interior to give greater weight to existence values in its procedures for assessing damages to public resources under the Superfund law.⁷ The concept has even been received favorably in literary publications such as *The New York Review of Books*, where the author of one article concluded that it would be central to achieving preservation of tropical forests and other world biodiversity objectives: “But why should citizens of industrialized countries pay to preserve resources that are legally the domain of other countries? An obscure tenet of economics provides a rationale. Certain things have what is known as an ‘existence value.’”⁸

The potential importance of existence values was emphasized by the large dollar magnitudes that some economists were attributing to this new source of economic benefit. In 1992, Walter Mead surveyed a variety of estimates of existence value.⁹ In one study the value to households across the United States of preserving visibility in the Grand Canyon was calculated to equal \$1.90 per household per year, yielding a long run discounted value to all U.S. households of \$6.8 billion. In another study preservation of the northern spotted owl in the Pacific Northwest was estimated to be significantly more valuable, having a total existence value for U.S. households of \$8.3 billion per year. Still another existence value study calculated that preserving whooping cranes would be worth \$32 billion per year for all the people of the U.S. Such dollar estimates raised the prospect that they might sharply alter government calculations of the economic merits of various policy proposals.

A GROWING DEBATE

Initially, most of the economic discussion of existence value reflected the views of proponents. Beginning in the 1970s, a small circle of economists sought to introduce a novel concept to the profession and to show that it could be applied successfully in practice. At first, most mainstream economists paid little attention. However, as the potential uses have widened and the policy stakes escalated, an active debate has broken out within the economics profession concerning the merits of the existence value concept.¹⁰ Non-economists have also entered the controversy, in some cases questioning the use of existence value.¹¹

The Exxon Corporation, facing large potential damage assessments as a result of the Exxon Valdez oil spill, and fearing that these assessments might be based in part on economic estimates of existence value for various states of nature in Prince William Sound, committed large financial resources to the issue. Exxon hired a number of leading economists to examine whether use of existence value was an appropriate economic method. Their critique was on the whole negative.¹² The State of Alaska and the federal government hired several leading environmental economists who took a more positive view.¹³

Reflecting the growing controversy inside and outside the economics profession, the National Oceanographic and Atmospheric Administration convened a panel of leading economists, chaired by Nobel prize winners Kenneth Arrow and Robert Solow, to review the issue. In 1993, the panel declared that, although great care must be exercised to prevent misuse, existence value should be incorporated into the set of economic tools available to government analysts.¹⁴ However, the NOAA report failed to resolve the matter, and an active debate continues.¹⁵

From a technical economic standpoint, there are a number of problems with existence value, which a growing literature has been probing.¹⁶ MIT economists Peter Diamond and Jerry Hausman conclude that “surveys designed to test for consistency between stated willingness-to-pay and economic theory have found that contingent valuation responses are not consistent with economic theory.”¹⁷ Other critics find that in practice existence value studies often yield estimates that are simply implausible.¹⁸ For example, respondents to survey questionnaires often give similar estimates for saving wild animals from human harm, even when the exact number of animals may vary by orders of magnitude.

Thus far, those who have actually attempted to measure existence values have studied mostly wilderness areas, threatened species and other environmental concerns. However, the use of the concept is potentially much broader. Tropical forests may have an existence value for people in

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rich nations, but there will also be a value for these same people in knowing of the existence of higher incomes for people in poor countries — which may depend on cutting the forests.

Indeed, there are endless possibilities for the calculation of existence value. Virtually any object invested with symbolic importance will have an existence value. For example, the presence of an abortion clinic in a community will cause some of the residents to feel good, while others feel bad. Burning the American flag will have a large negative existence value for many people. However, the knowledge that freedom of speech, including flag burning, is protected will also have a large positive value for many others. Should survey questionnaires, based on statements of dollar values as a way of communicating views about the desirability of government actions, be used to try to help resolve such issues? The same sorts of questions can be posed for an endless array of issues.

Diamond, Hausman, and several other leading economists have called on the profession to abandon the use of existence value on both theoretical and empirical grounds, such as those noted above.¹⁹ Nevertheless, others argue that, although there are significant difficulties and major potential pitfalls, Americans care a great deal about the environment, even when they are not directly affected, and any decision making calculus that did not incorporate such preferences as a benefit would be seriously inadequate.²⁰

These particular issues, while important, are not the subject of this paper. I conclude, like other critics, that use of existence value should be abandoned. My argument, however, is grounded in what might be called “economic theology.”²¹ To be sure, I mean theology in a broader sense than Christianity or other traditional religions alone. The distinguished theologian, Paul Tillich, once said in all seriousness that in terms of actual impact Karl Marx was “the most successful theologian since the Reformation.”²² Secular religions such as Marxism, it is now common to point out, have been a leading feature of the modern age, often a decisive force in shaping the course of history.²³

Secular religions do not speak directly of or appeal to God for authority. However, they are religions in the sense that they set a framework of meaning by which a person understands his or her life and the fundamental values that will shape it. Moreover, secular religions are often suffused with themes that have long been familiar from the history of Christianity and Judaism.²⁴ That is, in all likelihood, the explanation for their great appeal.²⁵

Existence value methods have thus far been applied mostly to issues such as wilderness and endangered species that, as I will show below, have a religious basis. To anticipate the conclusion of this paper, the problem with

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existence value is that in such cases it attempts to answer a religious question by an economic method. Making estimates of existence value then is both as silly and as meaningless as asking how much God is worth.

NATURE AS THE PATH TO KNOWLEDGE OF THE DIVINE

McPhee's discussions with Brower went well beyond the importance of preserving wilderness areas. Indeed, for Brower wilderness was simply one element in an overall worldview. Brower had for many years been touring lecture halls on college campuses and other places across the United States, preaching what McPhee labelled "the sermon." Brower's great appeal to many people was essentially religious. As McPhee wrote, "to put it mildly, there is something evangelical about Brower. His approach is in many ways analogous to the Reverend Dr. Billy Graham's exhortations to sinners to come forward and be saved now because if you go away without making a decision for Christ coronary thrombosis may level you before you reach the exit. Brower's crusade, like Graham's, began many years ago, and Brower's may have been more effective" — and was particularly influential in those portions of secular society where environmentalism was most popular and Graham's voice scarcely heard at all.²⁶

Indeed, Brower's approach fell in a longer religious tradition. There were previous environmental prophets, great texts, and sacred sites. According to McPhee, "throughout the sermon, Brower quotes the gospel — the gospel according to John Muir, . . . the gospel according to Henry David Thoreau."²⁷ As a former executive director of the Sierra Club for 17 years in the 1950s and 1960s, Brower was a direct follower in the line of Muir, who had founded the Sierra Club in 1892. In the late 19th and early 20th century, Muir was the foremost advocate of setting aside wild areas to preserve them for the future as free as possible of human impact.

For Muir the wilderness had an explicitly religious significance. He referred to primitive forests as "temples" and to trees as "psalm-singing." As Roderick Nash writes in *Wilderness and the American Mind*, Muir considered that the "wilderness glowed, to be sure, only for those who approached it on a higher spiritual plane In this condition he believed life's inner harmonies, fundamental truths of existence, stood out in bold relief."²⁸

For Muir this was one way of saying that he experienced the presence of God in the wilderness. On other occasions he was still more explicit about this. He believed that in the natural objects of wild areas it was possible to find "terrestrial manifestations of God." They provided a "window opening into heaven, a mirror reflecting the Creator," making it possible to encounter in nature some true "sparks of the Divine Soul."²⁹

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By creating the world, God had made it possible for human beings to experience directly a product of divine workmanship. The experience of nature untouched by human hand was as close to a direct encounter with God as would be possible on this earth. Yet, as a result of the spread of science and industry in the modern era, this available opening to the mind of God was being erased. Human beings were building dams, cutting forests, farming the land and in any number of other ways were imposing a strong human footprint on the divine Creation. It was only in the limited areas of wilderness that still remained, as Nash relates, that “*wild* nature provided the best ‘conductor of divinity’ because it was least associated with man’s artificial constructs.”³⁰ If at some point in the future all the wild areas were lost, future generations would be forever cut off from this main possible avenue of contact with God.

All this is to say that for Muir a wilderness area was literally a church. A church is a place of spiritual inspiration. It is a place where people come to learn about and better understand the meaning of God in their life. It is above all in church settings that God communicates his intentions for the world. A wilderness church is, furthermore, in one sense more imposing and spiritual than any church that can ever be built by the hand of man. A wilderness is a church literally built by God.

A SECULAR RELIGION

Today, these religious convictions that motivated Muir still lie behind the creation of wilderness. However, there is one significant difference. Environmentalism has become a secular religion. As Joseph Sax has said, in seeking to preserve national parks and other wild areas, he and his fellow preservationists are “secular prophets, preaching a message of secular salvation.”³¹ Roger Kennedy, the current director of the National Park Service, agrees: “Wilderness is a religious concept,” he wrote recently, adding, “we should conceive of wilderness as part of our religious life.” Wilderness puts us “in the presence of the unknowable and the uncontrollable before which all humans stand in awe” — that is to say, although Kennedy does not put it in just these words, in Wilderness we stand in the presence of God.³²

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In his essay, “John Muir and the Roots of American Environmentalism,” the distinguished environmental historian Donald Worster explores the process of secularization at work. Muir was brought up in Wisconsin immersed in the doctrines of a strict Protestant sect, Cambellism. These doctrines would play a major role in shaping his thinking for the rest of his life. But like so many others in the modern age, by his twenties he had left the traditional religious forms of his youth well behind. As Muir said, “I take more intense delight from reading the power and goodness of God from ‘the things which are made’ than from the Bible.”³³ Instead, Worster concludes

that, while the influence of his youthful piety remained strong, “Muir invented a new kind of frontier religion; one based on going to the wilderness to experience the loving presence of God.” It was a type of religion that would later also prove immensely attractive for the “many Americans who have made a similar transition from Judeo-Christianity to modern environmentalism.”³⁴

Although Muir abandoned the established Christian churches of his time, he did make frequent reference in his writings to God. Today, environmentalists such as Brower seldom speak directly of God but do regularly describe a “spiritual inspiration,” “sense of awe,” “source of values,” “humbleness of spirit,” and so forth that they experience in the wilderness. These descriptions are little changed from the language used by earlier generations to describe the feeling of being in the presence of God.

Many leading environmental thinkers in the United States today do explicitly characterize their mission, if not as Christian, as “religious.” In *The Voice of the Earth*, Theodore Roszak states that “the emerging worldview of our day will have to address questions of a frankly religious character.” Environmentalism, he argues, will have to provide answers to “ethical conduct, moral purpose, and the meaning of life,” and thereby help to guide “the soul” to the goal of “salvation.”³⁵ In early 1996, Interior Secretary Bruce Babbitt stated that “religious values are at the very core of the 1973 Endangered Species Act.”³⁶ Babbitt and other environmental leaders have sought to enlist Christian religious organizations to support the Act as a “Modern Noah’s Ark.”³⁷

The motto of the Wilderness Society today, borrowed from Thoreau, is “In wildness is the preservation of the world,” i.e., the salvation of the world. In its appeals for public support, the Wilderness Society today typically asserts of wilderness areas that “destroy them and we destroy our spirit . . . destroy them and we destroy our sense of values.”³⁸ The issue at stake in preserving wilderness is not merely a matter of the esthetics of a beautiful landscape or the retention of a museum piece of the geologic past. The real issue, as the Wilderness Society says, is to maintain the very moral foundations of the nation.

This might seem outlandish — or mere fund-raising rhetoric — to those who know little of the theological history of the idea of wilderness. However, in a long religious tradition that dates to seventeenth century New England, “a genuine reading of the book of [wild] nature is an ascension to the mind of God, both theoretical and practical.”³⁹ If the Wilderness Society is telling us today that our national values depend on preserving the wilderness, this is a secularized way of saying what many others have asserted before: that without God no foundation for values is possible. And God, as Muir said explicitly and contemporary secular environmentalism says implicitly, is encountered best of all in the wilderness.

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Thus, although some people have seen modern environmentalism as borrowing from Asian religions, pantheism and other sources, in truth, the core of the religious conviction for most environmentalists is a secularized Christianity. This should not be surprising in a nation where the Christian influence is ingrained in the national psyche — whether recognized explicitly in all cases or not.

A SECULAR PURITANISM

The process of secularization did not begin with Muir. He regarded himself as a follower of Emerson, and had studied his writings closely. The philosophy of New England transcendentalism represented the critical point where Christian theology — largely of a Puritan variety — was adapting rapidly to the new demands of the modern age. Historian Arthur Ekirch observes that in the transcendentalist philosophy “nature was the connecting link between God and man;” thus, “God spoke to man through nature.”⁴⁰

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Emerson, Thoreau, and other transcendentalists in turn drew much of their inspiration from their Boston forebearers. If transcendentalism saw an empty worship of false economic gods spreading across the land, the Puritans had always said that income and wealth were among the most dangerous corrupters of the souls of men. The Puritans also, as the Harvard historian Perry Miller commented, were “obsessed with” the “theology of nature.” In Puritan theology of the colonial era, “the creatures . . . are a glass in which we perceive the one art which fashions all the world, they are subordinate arguments and testimonies of the most wise God, pages of the book of nature, ministers and apostles of God, the vehicles and the way by which we are carried to God.”⁴¹

The idea that there is a moral imperative to preserve every species — that God has decreed that every species has a right to exist — has religious origins deep in western civilization. Calvin in the sixteenth century had said that human beings should be “instructed by this bare and simple testimony which the [animal] creatures render splendidly to the glory of God.” Indeed, according to Calvin, God intends for “the preservation of each species until the Last Day.”⁴² The bible had, as some environmental leaders are today invoking, given explicit instructions on this matter in the story of Noah and his Ark.

Jonathan Edwards, by some accounts America’s greatest theologian, was a key bridge between the seventeenth century Puritans and their nineteenth century New England intellectual heirs. Edwards said that “the disposition to communicate himself . . . was what moved [God] to create the world.”⁴³ As Miller observed, “what is persistent, from the [Puritan] covenant theology (and from the heretics against the covenant) to Edwards

and to Emerson is the Puritan's effort to confront, face to face, the image of a blinding divinity in the physical universe, and to look upon that universe without the intermediacy of ritual, of ceremony, of the Mass and the confessional."⁴⁴

It is not only in the attitudes towards wild nature that the environmental movement today offers a secular Puritanism. As McPhee relates, Brower commonly referred in his sermon to the human presence in the world as a "cancer."⁴⁵ More recently, Dave Foreman, the founder of Earth First, again said that "humans are a disease, a cancer on nature."⁴⁶ Or as Paul Watson, a founder of Greenpeace, put it, "we, the human species, have become a viral epidemic to the earth" — in truth, the "the AIDs of the earth."⁴⁷ This all harks back to the doom and gloom of a Puritan world of depraved human beings infected with sin, tempted to their own destruction at every step by the devil and his devious tricks. It should be expected, the Puritan ministers said, that a sinful world would soon have to pay a harsh punishment imposed by God — both on this earth and for most people in a life in hell to come.

Environmentalism in these and still other ways is today a powerful secular embodiment of the Puritan impulse in American life. Indeed, the Puritan tradition has had an extraordinary and enduring influence on the entire history of the United States. It should not be surprising that, although it is taking new and most often secular forms today, the Puritan influence is being strongly felt once again. As Worster explains:

The second legacy [of the environmental movement] from Protestantism is *ascetic discipline*. In large measure Protestantism began as a reaction against a European culture that seemed to be given over, outside the monastic orders, to sensuous, gratification-seeking behavior. . . . There was from the beginning, and it reappeared with vigor from time to time, a deep suspicion of unrestrained play, extravagant consumption, and self-indulgence, a suspicion that tended to be very skeptical of human nature, to fear that humans were born depraved and were in need of strict management.

The Protestant tradition may someday survive only among the nation's environmentalists. . . . Too often for the public they sound like gloomy echoes of Gilbert Burnet's ringing jeremiad of 1679: "The whole Nation is corrupted . . . and we may justly look for unheard of Calamities." Nonetheless, the environmentalists persist in warning that a return to the disciplined, self denying life may be the only way out for a world heading towards environmental catastrophe.

Surely it cannot be surprising that in a culture deeply rooted in Protestantism, we should find ourselves speaking its language, expressing its temperament, even when we thought we were free of all that.⁴⁸

The environmental movement today is strongest in Germany, Sweden, Holland — all countries with strong Protestant heritages. By contrast, in France, Spain and Italy, shaped much more by the Catholic influence, the

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role of green parties and environmental groups is much less. In Latin countries the full body of the Catholic church itself — with all its history and authority — was the means by which God communicated with the world. The Pope was the agent of God on earth; the faithful could find in the Catholic church an encounter with the majesty and mystery of God.

But having expelled Catholicism, Protestants had to look elsewhere. They often found their spiritual inspiration in nature. Nature became the place where Protestant believers could hear the voice of God. The Puritans, who most ruthlessly eliminated ceremony and imagery, had a particular need to find in nature a substitute for an abandoned mother church.

HOW MUCH IS A CHURCH WORTH?

The existence value of wilderness, endangered species, and other wild objects in nature is as much a theological as an economic subject.

This brief excursion into theological and environmental history should be enough to show that the existence value of wilderness, endangered species, and other wild objects in nature is as much a theological as an economic subject. Indeed, if the concept of existence value were to be extended into every possible realm, God has the ultimate existence value. A candidate wilderness area at least has the potential to be visited, even by those who value it most for the very fact of its existence.

To be sure, it hardly needs saying, many people will find any such talk of the existence value of God to be sacrilegious. Not that long ago a person could be burned at the stake for less. Yet, as the previous discussion has indicated, calculating a monetary value for the knowledge of the existence of a wilderness area comes close to the same thing. Nature untouched by human hand, as found in a wilderness, is a means of obtaining knowledge of the existence and qualities of God. In secular environmentalism this message comes in only a slightly revised form — wild nature is “the true source of values for the world.”

Admittedly, to value a wilderness in this way is to value the instrument of communication of religious truth rather than the actual knowledge itself. Thus, a more precisely analogous question would be: How much is the knowledge of the existence of a church worth?

This is, at least in concept, an answerable question. Economists can point out that, although leaders of institutional religions may be offended by the question, they do in fact make such calculations. Other things equal, more churches are likely to be better. But more churches also cost more money. In making a decision at some point not to build another church, a religious organization is in effect saying that the religious benefit of the additional church is not worth the cost of building and maintaining it. However crass it may seem to say, the additional communication of God’s word to the world does not create a benefit large enough to cover the added expense.

So how would one go about putting a marginal value on the existence of one more church (wilderness)? Answering this question, assuming a person is willing to think about the matter in these terms, would involve multiple concerns. One question to be addressed would be: How much does a particular new church (wilderness) add to the religious education of the faithful? How many new people might it draw into the faith? Related to this would be the question, how many churches (wildernesses) should a religious denomination ideally maintain and how many does it already have? This obviously depends partly on the total number of faithful, their geographic distribution, and the expected growth of the religious group in the future.

To be sure, yet another factor is that the building of a church is not just a way to be spiritually uplifted. It can also be a way of publicly and symbolically announcing a depth of religious commitment, a way of formally taking an action for the glory of God. Building a grand cathedral, such as Notre Dame in Paris, can take on a special religious significance when it involves a great sacrifice of effort — as religions have historically found meaning in making large sacrifices of many kinds. A wilderness area thus might become all the more meaningful in the same way: The more valuable the mineral, timber and other natural resources given up, the greater is the sacrifice and the greater the symbolic statement of allegiance to the faith.

Indeed, this is precisely why the Arctic National Wildlife Refuge (ANWR) has become so important to the environmental movement today. It is not just the on-the-ground environmental features of the area — there are in truth many other equally desolate and isolated places that are also important to some group of wild animals. The truly distinctive feature of ANWR is that so much oil would potentially be sacrificed. It creates a rare opportunity for a powerful religious statement. An analysis of the benefits and costs of ANWR oil development thus becomes in major part a tradeoff between two alternative “uses” of the oil: (1) as fuel for a modern economy, and (2) as a symbol which, left in the ground, would show the willingness of society to commit vast resources in order to construct a multi-billion dollar cathedral, a religious edifice requiring such large sacrifice that it would stand as one of the greatest (certainly most expensive) testimonies ever made to the glory of the faith.

From a social point of view extending beyond the immediate members of the denomination, it also has to be taken into account that a church may well also be valued by others outside the religion. Like the Vatican for non-Catholics, they may admire it as a work of art, or regard it as an important part of their history. Many people no doubt today do regard a wilderness in much this fashion. It is a museum piece providing a record of one point in the geologic transformation of the earth. Wilderness areas often have beautiful scenery that can be preserved for others in the future to enjoy.

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A church involves an element of the sacred; to put a money value on it profanes the faith. The very act of regarding the church in economic terms would in itself diminish the value of the church significantly.

To be sure, the discussion of all these potential analytical problems in putting a marginal value on the existence of a new church (wilderness) has begged the question of whether a religious body would ever want to do anything like that — whatever economists might be inclined to do. Indeed, most religious leaders would very likely reject any such suggestion out of hand. A church involves an element of the sacred; to put a money value on it profanes the faith. The very act of regarding the church in economic terms would in itself diminish the value of the church significantly.

Many environmental leaders do in fact react much as other religious leaders would to proposals to measure the existence value of a wilderness. While recognizing a potential political gain in putting their case in economic terms, environmentalists have on the whole been cool if not antagonistic to efforts by economists to calculate existence values for wild objects in nature.

Mark Sagoff, the current president of the Society of Environmental Ethics, writes that “contingent valuation [is] an attempt to expand economic theory to cover environmental values. . . . But what makes environmental values important — what makes them values — often has little or nothing to do with ‘preferences,’ with perceived well being, or with the ‘satisfaction’ people may feel in taking principled positions.” Aside from the many practical analytical problems, Sagoff rejects existence value in principle as an imperialistic attempt by economists to substitute clever techniques for “the role that the public discussion of values should play in formulating environmental policy.”⁴⁹ In short, it attempts to decide religious questions on (pseudo) scientific grounds.

NEGATIVE EXISTENCE VALUE

For Sagoff and many others, the very act of attempting to put a money value on the existence of an endangered species, a wilderness or other object of wild nature is itself a source of mental distress. It is like trying to put a money value on God, a sacrilege in any faith. Indeed, “negative existence values” are likely to be almost as common as positive evaluations, because in any diverse society it is almost inevitable that a cultural or religious symbol regarded favorably by one group will be seen negatively by some other group. Not surprisingly, the members of the economics profession who advocate use of existence value have largely neglected this particular possibility.

Indeed, in the specific case of wilderness, some people do regard the existence of a newly created wilderness area as a symbolic affront to their own values. It is for some of them offensive in the manner of throwing away good food — a deliberate waste of good timber, mineral and other natural resources. A leader of the current “wise-use” movement, Ron Arnold, thus writes that wilderness and other curbs on development “have bit by bit

impaired our productivity with excessive and unwise restrictions on forest and rangelands, on water and agriculture, on construction and manufacture, on energy and mineral, on every material value upon which our society is built.”⁵⁰

Although they might not put it precisely this way, other critics sense intuitively the following: The legal designation of a wilderness area represents symbolically a testimony to the glory of one faith, but this may be a faith different from their own, and they may thereby feel their own religious convictions diminished. One analyst has characterized the current fierce policy dispute over the creation of wilderness in southern Utah as at heart a clash between the Mormon theology of many Utah natives and a competing set of secular religious precepts.⁵¹

Still others might object that a wilderness is not a church today of any institutional Christian religion. Indeed, the rise of environmentalism is a reflection of the increasing secularization of American society. This in itself is likely to be an unpleasant thought to contemplate for some traditional Christians.⁵² There is also a possible source of “negative utility” in the fact that secular religions often borrow Christian messages and values, even while the followers in these secular faiths may not even be aware of the original inspiration.

ENVIRONMENTAL CREATIONISM

A “secular religion” is, in truth, an awkward combination. Such a religion typically appropriates the values, religious energy, organizational forms and other features of an earlier established religion, in most cases in the Judeo-Christian tradition. Yet, it also frequently sets all this in what is said to be a naturalistic or scientific context. The dressing of religion in the garb of science may end up seeking to blend contradictory elements.

Consider the theology of wilderness as found in the secular faith of much of contemporary environmentalism. The Puritans believed it was possible to go to the wilderness to gain a unique access to the mind of God. In the sixteenth and seventeenth centuries the Puritans could accept easily enough the biblical message of the Creation — of nature as a literal work of God untouched by human hand. But geological, biological and other sciences since that time have made it clear that the earth is many billions of years old and that it has been the subject of untold upheavals and transformations. Perhaps a wilderness can help to reveal natural laws as they are at work in the universe, and these laws may themselves reflect a divine source. However, a wilderness can no longer in any real sense be said to reveal an original and unchanged condition of the earth, as it was created by God.

The legal designation of a wilderness area represents symbolically a testimony to the glory of one faith.

Wilderness theology, in short, involves a form of creationism. Sometimes there is an explicit link to the Judeo-Christian story in Genesis. In other cases, where there is no explicit mention of God, it is perhaps best characterized as a “secular creationism.” Current environmental writings are in fact filled with references of both kinds to “the Creation.” Two recent books on environmental matters are titled *Caring for Creation* and *Covenant for a New Creation*.⁵³ A magazine article on environmental philosophers describes the belief that the current need is for a “spiritual bond between ourselves and the natural world similar to God’s covenant with creation.”⁵⁴ In much the same vein, if perhaps even more commonly, natural environments isolated from much European contact are widely referred to as a newly found — or currently sought after — “Eden” or “paradise” of the earth.⁵⁵

Such language has begun to invade even mainstream politics: Vice President Gore recently said that we must cease “heaping contempt on God’s creation.”⁵⁶ In a December 1995 speech remarkable for its candor in linking his environmental policy making to his religious beliefs, Interior Secretary Bruce Babbitt said that “our covenant” requires that we “protect the whole of Creation.” Wild areas are a source of our “values” because they are “a manifestation of the presence of our Creator.” It is necessary to protect every animal and plant species because “the earth is a sacred precinct, designed by and for the purposes of the Creator.”⁵⁷

Vice President Gore recently said that we must cease “heaping contempt on God’s creation.”

Such new forms of environmental creationism involve as much tension with the canons of scientific knowledge as the older and more familiar forms of Christian creationism. Indeed, while Babbitt made explicit reference to God, others do not, even while they speak religiously of “the creation.” Some might find the secular version the most objectionable of all: prominent biologists and other physical scientists sally forth to attack Christian creationism as ignorant obscurantism, even while some of them actively proselytize their own secular brand of environmental creationism.

In short, if awareness of these matters spreads, the designation of a wilderness area at some point could come to represent yet another cultural symbol: the existence of a large element of religious naivete — if not hypocrisy — among portions of the scientific establishment. All this is yet another potential source of negative existence value for at least some people.

The various forms of potential negative existence value are all further affected by an additional factor — whether the cultural symbol is established as a public or private action. If a private group gets together to build its own church, at least in America (it can be much different in other countries) few people are likely to be greatly upset, even though they may disagree strongly with the church creed. However, if it is the government that undertakes to build the church, this is an altogether different matter. It is not only that taxpayer money is being spent. The government is also seen as making an

official declaration formally affirming a particular set of religious values. When a citizen subscribes to another faith, the degree of offense taken — the sense of “negative utility” — will be all the greater.

A person thus might object strongly to the establishment of a government owned and operated wilderness area, but have little or no objection to a private group undertaking precisely the same mission. Indeed, the arguments of this paper suggest that the national system of wilderness areas should be privatized and any further wildernesses be created privately as well.⁵⁸

WHO ASKS THE QUESTION DETERMINES THE ANSWER

The multiple meanings of wilderness are typical of cultural symbols. An “X-rated” movie is a source of sexual titillation to one person, while the very existence of this movie may be a sign of society’s moral decay to another. The existence of a government welfare program may represent the compassion of society for the poor, but for other people it may symbolize the coercive confiscation of hard earned money from one set of people in order to give it away to undeserving others.

The proponents of the use of existence value methods suggest that in helping to resolve such issues they can apply their techniques according to the canons of the scientific method. They further suggest that existence value measurement, as a scientific exercise, will be replicable. The results will not be, as some might suspect, a reflection of the beliefs of the scientific investigators. Also, the more resources put into the investigation, the more consistent and reliable the estimates of monetary existence value should presumably become.

None of these things, however, is likely to be the case in practice. In fact, when economists undertake to estimate existence value, the methods they use are not complicated. In essence, the economic researcher solicits answers to a survey questionnaire. The questions and the answers may be given either orally or in writing (and sometimes with follow-up). For a particular wilderness area, for example, the questionnaire might start off with a brief description of the potential wilderness site, and then ask how much money the person — who may be a thousand or more miles away — would be willing to pay to know that this place will be preserved for the future with minimal human intrusion as a wilderness.

However, since the respondent often knows essentially nothing about the possible wilderness, it is typically necessary to provide some background for answering the question. This raises many potential difficulties. Consider some of the possible items that might be mentioned:

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1. A brief physical description of the wilderness;
2. In order to provide some needed context, a brief explanation of how many total wilderness areas have already been established in the United States and how this particular potential wilderness area being studied fits into that broader picture;
3. To include some historical context, an explanation that the idea of preserving wilderness has been traced by leading scholars to John Muir and New England transcendentalists, adding that for these people the purpose of visiting wild nature was to experience the presence of God;
4. For those survey respondents who might have an interest in theological analysis, a brief mention that in light of modern scientific knowledge the theology of wilderness today represents a kind of secular creationism.

To be sure, existence value researchers will no doubt strongly object that to administer the questionnaire with any such accompanying materials would be to bias significantly the results. And that is probably true. However, there may be no escaping this problem. To say that only “the facts” will be provided is untenable. There will almost always be far more facts than can ever be provided, requiring a ruthless selection. Why would a geologic description be a more appropriate set of facts than a historic or theological description? To argue for the exclusion of the theological information may be merely a disguised way of affirming the cultural values of a secular society.

Moreover, the more financial resources that are available, and thus the more information that can be conveyed to the set of respondents, the better a scientific analysis should be. However, in this case it will also mean that the greater the selection problem will become. Unlike the normal scientific undertaking, the more systematic the effort, the more variable and thus problematic existence value results may become. The only truly replicable analysis may well be one that conveys little information beyond the simple identification of the natural object under study. And it will be predictable essentially because it is based on a commonality of ignorance.

Even to state such a minimal detail as that the wilderness has “a total area of such and such” will be to give this feature emphasis over other potential descriptions. Another person might think that a more important detail is that the potential wild area has, say, “the second highest elevation in Colorado.” Who knows? The point is that no one can say in objective terms. When it comes to matters of cultural symbolism, the researcher can supply the information needed by respondents only by knowing in advance the appropriate cultural frame of reference.

Yet, in matters of public policy debate that relate to the creation of cultural (in many cases religious) symbols, the appropriate cultural frame of

reference is very often precisely the matter at issue. The economic researcher thus ends up merely translating his or her own value system — or that of the client providing the money — into a more formal and in the end pseudo-scientific set of economic results.

CONCLUSION: SCIENTIFIC ECONOMICS IN CRISIS

The idea of existence value, as suggested previously, was introduced as an attempt to address a new problem facing the economics profession. It should be said, in concluding, that the problem was real enough. The existence value cure, however, is worse than the disease.

The economics profession emerged in the progressive era as part of the design for the scientific management of American life. Since then, economists have occupied a privileged position in American professional and intellectual life. The secular religion of America for much of the twentieth century was economic progress. It was not a matter of the mere satisfaction of crass material desires. Rather, economic progress, as the faithful believed, would mean the end of scarcity. And abolishing scarcity would mean the elimination of the source — or so it was supposed — of most human conflict. The end result of economic progress thus would be nothing less than the salvation of mankind, the arrival of heaven on earth.⁵⁹

Biblically, morality is determined by those actions that lead to salvation. Therefore in progressive theology efficient and inefficient would become virtually synonymous with good and evil. It was the efficiency of an action that determined whether it contributed to economic progress and thus the secular salvation of the world. Progressivism has been aptly described by historians as “the gospel of efficiency.”⁶⁰

As the group responsible for judging efficiency, professional economists thus became more than a mere group of expert technicians; they were the ultimate judges of the morality of government programs, policies, and other issues. It was no accident that members of the economics profession, not Christian clergy or other social science professionals, were designated by law to sit at the door of the President. This was accomplished by the Employment Act of 1946 which created the Council of Economic Advisors.

By the 1960s, however, this priestly role of economists as the dispensers of moral legitimacy in American society was coming under growing challenge. Many factors contributed but there was one development that probably had the greatest impact. It was simply that the claims for the redeeming benefits of economic progress were not borne out by the actual history of the 20th century. As a matter of material gains alone, the economic progress that had been promised had in significant degree taken place in

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developed countries (rare, it might be noted, for a theological prophesy). But the moral transformation also promised had not occurred. Heaven on earth seemed as far off as ever. Indeed, despite immense material advance, the twentieth century has been filled with world warfare, the holocaust, Siberian prison camps, and other dismal events.

With belief in economic progress — as one might more formally say, “economic theology” — entering into a period of crisis, environmentalism proposed a new set of cultural symbols. Environmentalism, it might be said, offered a new religious vocabulary.⁶¹ If a dam taming a raging river had been a cathedral to economic progress, in environmental religion the same dam now became a virtual evil. For environmentalists, the new cathedral would be a wilderness area. The Wilderness Act of 1964 officially announced the arrival of a powerful new religious symbol in American public life.

What the concept of existence value sought to accomplish, in effect, was to elevate new environmental values without abandoning the authority of the reigning economic language.

Progressive religion had looked to the future; constant change was a sign of the continuing advance in building heaven on earth. The constant striving for efficiency was what ensured that progress would be taking place as rapidly as possible. The status quo, by contrast, was something to be left as rapidly behind as possible. What was “in existence” per se had no value.

All this, however, came into question as the hopes for moral as well as economic progress were challenged by so many unhappy events in the 20th century. Perhaps constant change was not the path to salvation. Perhaps greater attention and value should be placed on what already existed. Indeed, preservation of wilderness took on such cultural significance because it represented the longest existing thing of all — nature as it had been found since the Creation (or at least this could be the symbolism, if hard to square with modern geologic science).

The economists who promoted the idea of introducing a whole new realm of economic valuation — putting a value on “existence” for its own sake — very likely sensed all this. They saw that the vocabulary of economics, grounded as it was in the values of change, efficiency, and progress, was facing growing doubts in important parts of American life. Many of these economists were themselves probably sympathetic in some ways to this trend of events.

But what the concept of existence value sought to accomplish, in effect, was to elevate new environmental values without abandoning the authority of the reigning economic language. It was like saying that Christians and Muslims should stop fighting about religion because they are both correct. If efficiency had long been a basic term of social legitimacy, why not simply redefine efficiency to encompass as well the maximum preservation of the existing state of the world?

This was a scheme bound to fail. Theologically, it required that the forward march of progress should be measured by the extent to which people liked the fact that progress was not occurring. If belief in progress at some point down the road should in fact be displaced in the American value system, the accompanying vocabulary of progress would also be abandoned. There would no longer be any point to existence value because the very framework of efficiency analysis would no longer be of much interest. Some other new vocabulary and source of moral legitimacy — one can only guess today at what it might be — would have taken the place of professional economics.

That economists continue to be consulted, continue to receive large payments to make estimates of existence value, merely indicates that the vocabulary of progress is still a powerful source of legitimacy in America. It still pays to appeal to efficiency, even in those cases when the underlying goal may be something else altogether. For the remaining believers in progress, however, they should recognize that existence value amounts to a Trojan horse. It may seem for a time to sustain the social role of economics but in the long run it can only help to undermine it.

None of this should be taken as arguing that the critics of progress are wrong. Surely, they are at least in part right, in so far as the progressive gospel promised heaven on earth. Yet, it is also true that few people seem prepared to abandon the material comforts that modern science and industry have delivered in such abundance. The ultimate future of progress, in any case, is well beyond the scope of this paper. The important point is that existence value has little or nothing to contribute to this particular religious discussion. The fate of progress will have to be resolved the old fashioned way — through empirical observation, historical awareness, reasoned argument, moral judgment, testimonies of faith, theological analysis and other traditional means of religious exchange.

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ABOUT THE AUTHOR

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ENDNOTES

- ¹ John McPhee, *Encounters with the Archdruid* (New York: Farrar, Straus and Giroux, 1971), p. 74.
- ² See Bryan G. Norton, "Thoreau's Insect Analogies: Or Why Environmentalists Hate Mainstream Economists," *Environmental Ethics* Vol. 13 (1991), pp. 235-251.
- ³ Stanley Lebergott, "Long-Term Trends in the U.S. Standard of Living," in Julian L. Simon, ed., *The State of Humanity* (Cambridge, MA: Balckwell Publishers, 1995), p. 149.
- ⁴ John V. Krutilla, "Conservation Reconsidered?" *American Economic Review* (September 1967).
- ⁵ Roger Bate, *Pick A Number: A Critique of Contingent Valuation Methodology and its Application in Public Policy*, Competitive Enterprise Institute, February 1994.
- ⁶ Robert Mitchell and Richard Carson, *Using Surveys to Value Public Goods: The Contingent Valuation Method* (Washington, D.C.: Resources for the Future, 1989).
- ⁷ *State of Ohio v. United States Department of the Interior*, 880 F. 2d 432 (D.C. Circuit 1989).
- ⁸ John Terborgh, "A Matter of Life and Death," *New York Review of Books*, November 5, 1992, p. 6.
- ⁹ Walter J. Mead, "Review and Analysis of Recent State-of-the-Art Contingent Valuation Studies," in Cambridge Economics, Inc., *Contingent Valuation: A Critical Assessment*, Papers from a Symposium in Washington, D.C., April 2-3, 1992.
- ¹⁰ See Donald H. Rosenthal and Robert H. Nelson, "Why Existence Values Should Not Be Used in Cost-Benefit Analysis," *Journal of Policy Analysis and Management* (Winter 1992); Raymond J. Kopp, "Why Existence Values Should Be Used in Benefit-Cost Analysis," *Journal of Policy Analysis and Management* (Winter 1992); John Quiggin, "Existence Value and Benefit-Cost Analysis: A Third View," *Journal of Policy Analysis and Management* Vol. 12, No. 1 (1993); Steven F. Edwards, "Rethinking Existence Values," *Land Economics* (February 1992); William H. Desvousges, et. al., "Contingent Valuation: The Wrong Tool to Measure Passive-Use Losses," *Choices* (Second Quarter 1993); Alan Randall, "Passive-Use and Contingent Valuation — Valid for Damage Assessment," *Choices* (Second Quarter 1993); and Richard Stewart, ed., *Natural Resource Damages: A Legal, Economic, and Policy Analysis* (Washington, D.C.: National Legal Center for the Public Interest, September 1995).
- ¹¹ "Ask a Silly Question, . . ." Contingent Valuation of Natural Resource Damages," *Harvard Law Review* (June 1992); and Charles J. DiBona, "Assessing Environmental Damage," *Issues in Science and Technology* (Fall 1992).
- ¹² Jerry A. Hausman, ed., *Contingent Valuation: A Critical Assessment* (New York: North Holland, 1993).
- ¹³ Richard Carson, et. al., *A Contingent Valuation Study of Lost Passive Use Values Resulting from the Exxon Valdez Oil Spill*, Report to the Attorney General of Alaska, Natural Resource Damage Assessment, Inc., La Jolla, California, November 1992.
- ¹⁴ Kenneth Arrow, Robert Solow, Paul R. Portney, Edward Leamer, Roy Radner and Howard Schuman, *Report of the NOAA Panel on Contingent Valuation*. 58 *Federal Register* 4601 (January 15, 1993).
- ¹⁵ Paul R. Portney, "The Contingent Valuation Debate: Why Economists Should Care," *Journal of Economic Perspectives* (Fall 1994).
- ¹⁶ Hausman, ed., *Contingent Valuation: A Critical Assessment*.
- ¹⁷ Peter A. Diamond and Jerry A. Hausman, "Contingent Valuation: Is Some Number Better than No Number?," *Journal of Economic Perspectives* (Fall 1994), p. 46. See also Diamond and Hausman, "On Contingent Valuation Measurement of Nonuse Values," in Hausman, ed. *Contingent Valuation: A Critical Assessment*; and Paul Milgrom, "Is Sympathy an Economic Value?: Philosophy, Economics, and the Contingent Valuation Method," in Hausman, ed. *Contingent Valuation: A Critical Assessment*.

- ¹⁸ William H. Desvousges, et. al., “Measuring Natural Resource Damages with Contingent Valuation: Tests of Validity and Reliability,” in Hausman, ed., *Contingent Valuation: A Critical Assessment*.
- ¹⁹ Diamond and Hausman, “Contingent Valuation: Is Some Number Better than No Number?,” also Emery N. Castle and Robert P. Berrens, “Endangeres Species, Economic Analysis, and the Safe Minimum Standard,” *Northwest Environmental Journal* 9:108-130 (1993).
- ²⁰ W. Michael Hanemann, “Valuing the Environment Through Contingent Valuation,” *Journal of Economic Perspectives* (Fall 1994).
- ²¹ See, more broadly, Robert H. Nelson, *Reaching for Heaven on Earth: The Theological Meaning of Economics* (Lanham, MD: Rowman and Littlefield, 1991).
- ²² Paul Tillich, *A History of Christian Thought: From Its Judaic and Hellenistic Origins to Existentialism* (New York: Simon and Schuster, 1967), p. 476.
- ²³ J.L. Talmon, *Political Messianism: The Romantic Phase* (Boulder, CO: Westview Press, 1985 — first ed. 1960).
- ²⁴ Willis B. Glover, *Biblical Origins of Modern Secular Culture: An Essay in the Interpretation of Western History* (Macon, GA: Mercer University Press, 1984).
- ²⁵ See Nelson, *Reaching for Heaven on Earth*.
- ²⁶ McPhee, *Encounters with the Archdruid*, pp. 79, 83.
- ²⁷ *Ibid.*, p. 84.
- ²⁸ Roderick Nash, *Wilderness and the American Mind* (New Haven: Yale University Press, 1973), pp. 125, 126.
- ²⁹ Quoted in Nash, *Wilderness and the American Mind*, p. 125.
- ³⁰ Nash, *Wilderness and the American Mind*, p. 125.
- ³¹ Joseph L. Sax, *Mountains without Handrails: Reflections on the National Parks* (Ann Arbor: University of Michigan Press, 1980), p. 104.
- ³² Roger G. Kennedy, “The Fish That Will Not Take Our Hooks,” *Wilderness* (Spring 1995), p. 28.
- ³³ Quoted in Donald Worster, *The Wealth of Nature: Environmental History and the Ecological Imagination* (New York: Oxford University Press, 1993), p. 193.
- ³⁴ Worster, *The Wealth of Nature*, pp. 195, 196.
- ³⁵ Theodore Roszak, *The Voice of the Earth* (New York: Simon and Schuster, 1992), pp. 101, 51.
- ³⁶ Remarks of Interior Secretary Bruce Babbitt, quoted in Associated Press Online, January 31, 1996.
- ³⁷ Peter Steifels, “Evangelical Group Defends Laws Protecting Endangered Species as a Modern ‘Noah’s Ark,’” *New York Times*, January 31, 1996, p. A12.
- ³⁸ Fund raising solicitation received by author.
- ³⁹ Quoted from a Puritan source in Perry Miller, *The New England Mind: The Seventeenth Century* (Cambridge, MA: Harvard University Press, 1954), p. 209.
- ⁴⁰ Arthur A. Ekirch, *Man and Nature in America* (New York: Columbia University Press, 1963), pp. 51-52.
- ⁴¹ Miller, *The New England Mind: The Seventeenth Century*, pp. 208-209.
- ⁴² John Calvin, *Institutes of the Christian Religion*, in Hugh T. Kerr, ed. *Calvin’s Institutes: A New Compend* (Louisville, KY: Westminster/John Knox Press, 1989), pp. 27, 41.
- ⁴³ Quoted in Perry Miller, *Errand into the Wilderness* (New York: Harper and Row, 1964), p. 194.
- ⁴⁴ Miller, *Errand into the Wilderness*, p. 185.
- ⁴⁵ McPhee, *Encounters with the Archdruid*, p. 83.
- ⁴⁶ Quoted in Douglas S. Looney, “Protection or Provocateur?,” *Sports Illustrated*, May 27, 1991.
- ⁴⁷ Paul Watson, “On the Precedence of Natural Law,” *Journal of Environmental Law and Litigation*, Vol. 3 (1988), p. 82.
- ⁴⁸ Worster, *The Wealth of Nature*, pp. 197-98, 200.

- ⁴⁹ Mark Sagoff, "On the Expansion of Economic Theory: A Rejoinder," *Economy and Environment* (Summer 1994), pp. 7-8.
- ⁵⁰ Ron Arnold, *At the Eye of the Storm: James Watt and the Environmentalists* (Chicago: Henry Regnery, 1982), p. 123.
- ⁵¹ Brooke Williams, "Love or Power?," *Northern Lights*, Vol. 7, No. 4 (Fall 1991).
- ⁵² The Catholic League for Religious and Civil Rights, for example, reacted to speeches by Interior Secretary Bruce Babbitt defending the Endangered Species Act in biblical terms with a press release, "Bruce Babbitt Maligms Catholicism." Babbitt had said in his speech that he found more spiritual inspiration in nature than in the Catholic church of his youth. The President of the League, William Donohue, declared that the Secretary's explanation of his religious turn away from Catholicism showed political "stupidity as well as unfairness." See *Human Events*, January 12, 1996.
- ⁵³ Max Oelschlaeger, *Caring for Creation: An Ecumenical Approach to the Environmental Crisis* (New Haven: Yale University Press, 1994); and Carol S. Robb and Carl J. Casebolt, eds., *Covenant for a New Creation: Ethics, Religion, and Public Policy* (Mary Knoll, NY: Orbis, 1991).
- ⁵⁴ Peter Borelli, "The Ecophilosophers," *The Amicus Journal* (Spring 1988), p. 35.
- ⁵⁵ See, for example, the *Time* magazine cover story on "Inside the World's Last Eden: A Personal Journal to a Place No Human Has Ever Seen," July 13, 1992; or, similarly, John McCormick, *Reclaiming Paradise: The Global Environmental Movement* (Bloomington: University of Indiana Press, 1989).
- ⁵⁶ Quoted in Gustav Niebuhr, "Black Churches' Efforts on Environmentalism Praised by Gore," *Washington Post*, December 3, 1993, p. A13.
- ⁵⁷ Bruce Babbitt, "Our Covenant: To Protect the *Whole* of Creation," circulated to top staff on the Department of the Interior eMail system, December 14, 1995. This speech was delivered on various occasions, including the League of Conservation Voters in New York City in early December 1995.
- ⁵⁸ Robert H. Nelson, "Wilderness, Church, and State," *Liberty* (September 1992).
- ⁵⁹ Nelson, *Reaching for Heaven on Earth*.
- ⁶⁰ Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, MA: Harvard University Press, 1959).
- ⁶¹ Robert H. Nelson, "Sustainability, Efficiency and God: Economic Values and the Sustainability Debate," *Annual Review of Ecology and Systematics* (1995).