

Theology and Ecology

Religious Belief and Environmental Stewardship

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Even though we are well into the twenty-first century, we continue to be profoundly affected by events and developments of the twentieth century, a period of tremendous human achievement and remarkable progress in so many areas. The world's population increased fourfold while the global economy increased twentyfold. The material quality of life improved for people around the world in ways unprecedented in human history. But the twentieth century left for us daunting challenges, including a host of environmental problems that challenge the well-being of current and future generations, such as the threat of disruptive climate change, the irreversible loss of biodiversity, and the scarcity of clean water.

This article explores the potential role religious belief might play in U.S. environmental policy making. It examines how religious groups are engaged in environmental policy making, the strengths and limitations of these efforts, and the prospects for religious-based contributions to environmental protection policies. Given the importance of environmental stewardship in Mormon theology, the article includes a discussion of how the experience of other believers might illuminate some of the choices members of The Church of Jesus Christ of Latter-day Saints face when engaging in public debates over environmental policy.

Ecological Threats

A series of reports by the World Resources Institute, the United Nations Environment Programme, the Worldwatch Institute, and a host of scientists in other research institutions, universities, and government agencies have outlined a sobering set of environmental threats, risks, and

Gary Clifford Bryner (1951–2010) was an exceptional teacher, mentor, scholar, and example. He cared about students and associates; he cared about the power of ideas and knowledge; he cared about the economically poor and the sustainable potential of the earth. As a faithful Latter-day Saint, he sought for the sacred in idea and action with a constant focus on good works and the potential of humankind to care more for one another and for the earth.



I was privileged to first meet Gary in the early 1990s. He was a freshly tenured faculty member, an engaged law student, and was on his way toward several prestigious teaching awards. I was an undergraduate majoring in conservation biology and was impressed with Gary's peaceful confidence in the power of interdisciplinary solutions to many environmental problems. When it came time for his honors environmental science class to travel to Mexico, I tagged along. I made a minor contribution to the development projects, but Gary made a major contribution to my growing environmental philosophy, teaching me that many problems are solved through interdisciplinary cooperation and passion. Gary showed me, first as a student and later as a colleague, an example of how individuals can use their unique talents to make a difference in the world.

Gary served on the board of directors for the Inter-American Foundation and the Mali Rising Foundation and worked as a consultant to the Pew Charitable Trusts, making an even broader impact on international development. Remarkably, while he was mentoring students, he went back to school and received his juris doctorate from the J. Reuben Clark Law School. With this degree, together with his PhD in political science from Cornell University, he had the tools necessary to link broad global issues such as energy and climate-change law to impacts on individuals in developing countries. This paper is representative of his life effort to connect his disciplinary expertise with his strong faith to promote a more sustainable, equitable world consistent with the teachings of Jesus Christ.

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challenges.¹ Many environmental threats are characterized as ecological problems that affect humans only indirectly, such as reports that one in four mammals faces extinction because of habitat loss, hunting, and climate change.² Other environmental problems threaten life directly. For instance, a study by Plantlife International reported that some 15,000 of the estimated 50,000 plant species that have medicinal value to humans face extinction due to habitat loss, overharvesting, and pollution.³ “The World Commission on Water predicts that water use will increase by 50 percent over the coming 30 years and that 4 billion people—half the world’s population—will live under conditions of severe water stress in 2025.”⁴ One-third of the world’s population lives in countries already experiencing moderate to high water stress, and without serious water conservation measures and coordinated watershed planning among water users, that portion could rise to two-thirds in the next thirty years. Climate change is widely viewed by scientists as the most serious environmental threat facing humankind because of its potential impact on drinking water supplies, water for agriculture, the spread of diseases, and a host of other problems.⁵ Table 1 summarizes some of the major global environmental threats that are widely discussed in the scientific literature.

In 2009, a group of scientists writing in the journal *Nature* proposed a way to identify and quantify boundaries for human activity that should not be transgressed if we are to prevent unacceptable global environmental changes. Such boundaries are necessary if we wish to preserve the environmental stability the planet has enjoyed during the past ten thousand years. They argue that human activities have pushed earth systems beyond the boundaries of the stable environmental state and pose catastrophic threats for much of the planet. During the Holocene era, environmental changes have been ubiquitous but within the regulatory capacity of earth systems to maintain stable conditions that are friendly to human development. Since the Industrial Revolution, a new era called the Anthropocene has been dominated by growing use of fossil fuels and industrialized agriculture that threaten the planet’s stability and could result in abrupt and possibly irreversible changes, with significant negative impacts on human development.⁶

Scientists estimate that human interference with three of the nine earth-system processes—climate, biodiversity, and the nitrogen cycle—has caused them to exceed safe boundaries, and others are close to doing so. These thresholds can be defined by critical variables such as the concentration of carbon dioxide or the number of species going extinct beyond the natural or background level. The climate boundary is proposed to be 350 parts per million of CO₂ in the atmosphere (the current level is 387). The boundary for biodiversity loss is no more than one per million

Table 1

Global and Environmental Trends	
Biodiversity	Around 24 percent of mammals and 12 percent of birds are classified as threatened.
Deforestation	The net loss in global forest area from 2000 to 2010 averaged 5.2 million hectares annually, down from 8.3 million hectares during the 1990s. The net loss during the period from 2000 to 2010 equalled an area the size of Costa Rica.
Desertification	Desertification affects as much as one-sixth of the world's population, 70 percent of all drylands, and one-fourth of the world's total land area and costs the world approximately U.S. \$42 billion a year.
Energy	Global energy use, which has increased nearly 70 percent since 1971, is projected to increase at more than 2 percent annually for the next 15 years.
Fish Stocks	Three-fourths of the world's fish stocks are in distress and nearing depletion while marine ecosystems continue to deteriorate.
Land Degredation	By 1990, poor agricultural practices had contributed to the degradation of 562 million hectares, about 38 percent of the roughly 1.5 billion hectares in cropland worldwide. Since 1990, an additional 5–6 million hectares have been lost to severe soil degradation annually.
Water	One-third of the world's population lives in countries experiencing moderate to high water stress. Every day, 2 million tons of human waste are disposed of in water courses.
Wetlands	It is estimated that 50 percent of wetlands have been lost since 1900.

Sources:

UNESCO, World Water Assessment Programme, http://www.unesco.org/water/wwap/facts_figures/protecting_ecosystems.shtml (accessed July 29, 2010); United Nations Environment Programme, GEO-3, 4, <http://www.unep.org/geo/geo3/english/pdfs/synthesis.pdf> (accessed July 29, 2010); UN Department of Economic and Social Affairs, Division for Sustainable Development, Agenda 21, Chapter 12, "Managing Fragile Ecosystems: Combating Desertification and Drought," http://www.un.org/esa/dsd/agenda21/res_agenda21_12.shtml (accessed August 4, 2010); The International Development Research Centre, "The Cost of Desertification," http://www.idrc.ca/en/ev-92257-201-1-DO_TOPIC.html (accessed August 4, 2010); World Resources Institute, "Feeding the World: Disappearing Land," <http://www.wri.org/publication/content/8426> (accessed August 4, 2010); Food and Agriculture Organization of the United Nations, "World Deforestation Decreases, but Remains Alarming in Many Countries," March 25, 2010, <http://www.fao.org/news/story/pt/item/40893/icode/en> (accessed August 4, 2010); United Nations Department of Public Information, Review Conference on Fish Stocks Agreement, May 25, 2010, <http://www.un.org/News/Press/docs/2010/sea1933.doc.htm> (accessed August 4, 2010); World Resources Institute, "Trends Point to Gains in Human Development, While Many Negative Human Impacts on Vital Ecosystems Are Increasing," <http://www.wri.org/publication/content/8604> (accessed August 4, 2010).

species each year; the current rate is between one hundred to one thousand times that rate. The limit for the amount of nitrogen removed from the earth, used to produce fertilizer for agriculture and other purposes, is proposed to be 35 million tons per year; the current volume is 120 million tons. Excess nitrogen ends up polluting waterways and coastal regions, and nitrous oxide is a potent greenhouse gas. Boundaries may soon be reached for global freshwater use, the amount of land converted to cropland, and ocean acidification. All these boundaries are also intertwined: “We do not have the luxury of concentrating our efforts on any one of them in isolation from the others. If one boundary is transgressed, then the other boundaries are also under serious risk.” There are many uncertainties about how long it will take to produce dangerous environmental changes or “trigger other feedbacks that drastically reduce the ability of the Earth system, or important subsystems, to return to safe levels.”⁷

Three characteristics of global environmental trends are particularly significant. First, we cannot grow our way out of environmental problems simply by continuing to pursue economic growth. Environmental trends are clear and sobering. Many of the most serious environmental problems have grown worse, such as greenhouse gas emissions, the loss of biodiversity, and the accumulation of chemicals in the environment. Environmental scientists argue that the planet cannot sustain current levels of economic growth pursued by the wealthy, industrialized nations. Our current consumption of natural resources is not sustainable, especially if people in the developing world increase their resource use. These growth problems not only threaten people living now but also pose a tremendous challenge for succeeding generations as they pursue their life choices. This is what environmental scientists describe as unsustainability—the current, unprecedented level of pollution and consumption that is occurring in the industrial world that cannot be extended to everyone on earth and cannot be sustained into the future. The idea of the ecological footprint compares the environmental consequences of actions with natural resource limits and ecosystem functions. It ultimately estimates how many earths would be required to provide the flows of resources and wastes if everyone on earth lived a particular lifestyle. The ecological footprint—the amount of land needed to supply food, housing, energy, transportation, and goods and services—of the average American is twenty-four acres, but the United States only has about thirteen acres per person. The deficit it made up by importing resources from other countries and outsourcing pollution. Other high-consumption societies have a similar deficit.⁸

Second, the most immediate environmental problems are typically found in the less developed countries, where poverty and environmental

decline are inextricably intertwined. People who struggle to survive often engage in environmentally unsustainable practices, and they are particularly affected by water and air pollution, lack of clean drinking water and sanitation, and loss of biodiversity. Addressing Third World problems is a profoundly important moral imperative because of the opportunity this affords to reduce suffering and remedy inequities in the distribution of benefits and burdens throughout the world. But it also poses a major political challenge since those who are best positioned to help solve these problems may be unaware of them and largely unaffected by them.

Third, in the past, the public has sometimes been more alarmed about environmental problems than scientists and policymakers, who have often criticized average citizens for having irrational fears and for poorly understanding risks. Now the opposite is occurring. Most scientists are alarmed about the loss of biodiversity, the threat of climate change, and the ecological unsustainability of our economy. In the case of climate change, for example, there are tremendous uncertainties and unknowns about the causes and consequences of disruptive climate threats, and the uncertainty means that future conditions could go either way, from relatively benign evolution to catastrophe. "A Warning to Humanity," endorsed more than a decade ago by more than a thousand of the world's leading scientists, summarizes the situation in sobering terms: "Human beings and the natural world are on a collision course. . . . If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know."⁹

These three characterizations of the state of the global environment are contested. Some measures of environmental quality show significant improvement over time. Air pollution, for example, the kind of pollution that in general has the greatest impact on human health, has improved throughout the developed world. In the United States, emissions of total suspended particles peaked around 1950 and declined steadily until the 1980s, primarily as a result of increased use of cleaner fuels and controls placed on fuel burning. Carbon monoxide emissions peaked in about 1970 and have fallen noticeably since then, largely a result of motor vehicle emission controls. Emissions of volatile organic compounds, the primary constituent of ozone pollution, also peaked in the 1970s but have declined only slightly in subsequent decades, as have nitrogen oxide emissions. Economic growth, technological modernization, and environmental regulation combine to improve air quality.¹⁰ Data from other industrialized countries show a similar pattern of dramatic improvement in air quality

over the past three decades while, at the same time, population has grown by more than a third and their economies have more than doubled.¹¹

As countries become wealthier, their citizens demand more protection from environmental hazards, and they have the resources to invest in cleaner technologies and in pollution control. The most immediate environmental problems are increasingly found in the less developed countries, where poverty and environmental decline are inextricably intertwined. Longer-term environmental threats, such as disruptive climate change, are a concern in both the industrialized and the developing world. Global warming has already been associated with significant changes in the climate of some regions and is expected to exacerbate problems of drought and severe storms that are already a plague throughout the developing world. Consumption of nonrenewable resources is similarly a global problem. Many petroleum engineers and analysts, for example, argue that we have reached or soon will reach peak oil, the point at which the maximum rate of global petroleum extraction is reached and production begins an inexorable decline. But demand is steadily growing, and this will produce a tremendous gap between supply and demand, creating profound disruptions as prices eventually rise and conventional economic growth no longer becomes possible.¹² These problems not only threaten people now but also pose a tremendous challenge as we think about their impact on the lives of future generations.

Some advocates of economic growth argue that future generations will be better off if we leave them greater wealth to adapt to whatever problems they face, rather than trying to prevent specific problems from occurring.¹³ Investments made now, such as the development of new technologies and new sources of clean energy, will benefit those who come after us. There is a yawning gap between economists and ecological scientists over the future of the planet, with many economists arguing that wealth is the key to the future, and that it can be used to solve whatever environmental problems occur, while ecologists warn that natural processes and ecological services on which life depends are irreplaceable.¹⁴ The message of economists is much more attractive: continue to consume as much as you want, be free to live your lives as you wish, and do not worry about future generations. However, as discussed below, the warnings from ecological science about the importance of ensuring our activities are environmentally sustainable is a much more cautious, conservative approach to how we live our lives and much more consonant with religious values and beliefs than the pursuit of unbridled growth and consumption.

Mormon Theology and Environmental Stewardship

Evidence of practices that threaten a sustainable planet should be no surprise to members of The Church of Jesus Christ of Latter-day Saints. The day we live in has been characterized by “great pollutions upon the face of the earth” (Morm. 8:31). There are plentiful natural resources, but they are to be distributed equally: “The earth is full, and there is enough to spare” (D&C 104:17). “And it is my purpose to provide for my saints. . . . But it must needs be done in mine own way; and behold this is the way that I, the Lord, have decreed to provide for my saints, that the poor shall be exalted, in that the rich are made low” (D&C 104:15–16). “Therefore, if any man shall take of the abundance which I have made, and impart not his portion, according to the law of my gospel, unto the poor and the needy, he shall, with the wicked, lift up his eyes in hell” (D&C 104:18). The warning applies not just to members of the Church: “The beasts of the field and the fowls of the air, and that which cometh of the earth, is ordained for the use of man for food and for raiment, and that he might have in abundance. But it is not given that one man should possess that which is above another, wherefore the world lieth in sin” (D&C 49:19–20). Many other scriptures emphasize the importance of temporal equality and eliminating poverty (see D&C 70:14; 78:6; Moses 7:18).

These themes are also reflected in statements by Presidents of the Church and have been quoted in other contexts but seem to be particularly relevant here. Said Brigham Young: “The earth is very good in and of itself, and has abided a celestial law, consequently we should not despise it . . . but rather desire and strive to obey the same law that the earth abides. . . . Fields and mountains, trees and flowers, and all that fly, swim or move upon the ground are lessons for study in the great school of our Heavenly Father. . . . Not one particle of all that comprises this vast creation of God is our own. Everything we have has been bestowed upon us for our action, to see what we would do with it.”¹⁵

Hugh Nibley wrote, “A favorite theme of Brigham Young was that the dominion God gives man is designed to test him, to enable him to show to himself, his fellows, and all the heavens just how he would act if entrusted with God’s own power; if he does not act in a godlike manner, he will never be entrusted with a creation of his own worlds without end.”¹⁶ Nibley observed:

In commanding Adam to “be fruitful, and multiply,” God also informed him that he had given the identical command to all his other creatures, and furthermore, that he was putting Adam in charge of things to see to it that his purposes were fulfilled. Specifically, he was to “replenish the earth, and subdue it, and to have dominion over” every living

thing in the biosphere (Abraham 4:28). There are two clearly marked departments—the earth itself as a storehouse and source of life, which Adam is to keep replenished (filled is the word), and the creatures that move about on and over the earth, over which he is to have dominion. As Brigham Young explains it, while “subduing the earth” we must be about “multiplying those organisms of plants and animals God has designed shall dwell upon it,” namely, “all forms of life,” each to multiply in its sphere and element and have joy therein.¹⁷

President Ezra Taft Benson, speaking as President of the Quorum of the Twelve Apostles, warned Church members:

Every generation has its tests and its chance to stand and prove itself. Would you like to know one of our toughest tests? Hear the warning words of President Brigham Young, “The worst fear I have about this people is that they will get rich in this country, forget God and his people, wax fat, and kick themselves out of the Church and go to hell. This people will stand mobbing, robbing, poverty and all manner of persecution and be true. But my greatest fear is they cannot stand wealth.”

Ours then seems to be the toughest test of all for the evils are more subtle, more clever. It all seems less menacing and it is harder to detect. While every test of righteousness represents a struggle, this particular test seems like no test at all, no struggle and so could be the most deceiving of all tests.

Do you know what peace and prosperity can do to a people—It can put them to sleep. The Book of Mormon warned us of how the devil, in the last days, would lead us away carefully down to hell.¹⁸

President Harold B. Lee offered a similar view: “We are tested and we are tried, we are going through some of the severest tests today and we don’t realize perhaps the severity of the tests that we’re going through. . . . Today we are basking in the lap of luxury, the like of which we’ve never seen before in the history of the world. It would seem that probably this is the most severe test of any test that we’ve ever had in the history of this Church.”¹⁹ So did President Spencer W. Kimball:

The Lord has blessed us as a people with a prosperity unequalled in times past. The resources that have been placed in our power are good, and necessary to our work here on the earth. But I am afraid that many of us have been surfeited with flocks and herds and acres and barns and wealth and have begun to worship them as false gods, and they have power over us. Do we have more of these good things than our faith can stand? . . .

As the Lord himself said in our day, “They seek not the Lord to establish his righteousness, but every man walketh in his own way, and after the image of his own god, whose image is in the likeness of the world, and *whose substance is that of an idol*, which waxeth old and shall perish in Babylon, even Babylon the great, which shall fall” (D&C 1:16;

emphasis added). . . . It may seem a little difficult at first, but when a person begins to catch a vision of the true work, when he begins to see something of eternity in its true perspective, the blessings begin to far outweigh the cost of leaving “the world” behind.²⁰

A growing literature articulates Mormon perspectives on the environment. Hugh Nibley’s essays are among the earliest explorations of the implications of Mormon theology for environmental issues.²¹ Thomas G. Alexander, Richard Jackson, and others have explored the role of environmental ideas in the settlement and development of Utah and the West.²² Two volumes of essays on environmental issues have been published in recent years. Terry Tempest Williams, William B. Smart, and Gibbs M. Smith edited *New Genesis: A Mormon Reader on Land and Community*, with essays on personal conversion to environmentalism, philosophical perspectives, environmental sustainability in developing countries, early Mormon practices and environmental principles, and examples of ecologically sustainable practices.²³ In *Stewardship and the Creation*, George B. Handley, Terry B. Ball, and Steven L. Peck brought together more than a dozen essays on the history of conservation in Utah, philosophical and theological frameworks for environmental stewardship, environmentalism and economic prosperity, sustainability and cities, and studies of practical issues such as the management of national forests, reintroduction of the wolf into Utah, and landscape water conservation.²⁴

These and other essays suggest a number of principles that Mormon scriptures and sacred teachings can contribute to the debate among people of faith over the theological implications of religion for environmentalism.²⁵ These principles have been well developed in the literature and are only summarized briefly here. First, the earth and all creation belong to God; they witness, bear record of, and reflect his power and love for humankind. The earth’s resources are to be used not just to meet human needs but also to elevate the human spirit. All forms of life have intrinsic value. All are creations of God. All living things have a spiritual as well as an earthly dimension, and all were created spiritually before being placed on the earth physically (see Moses 3:5; D&C 59:18). Second, our use of resources should be guided by principles of equity, conservation, and minimal waste; consumption that meets our needs; and restraint that encourages spiritual values (D&C 49:19–20; 70:14; 104:14–17). Third, materialism and overconsumption are threats to environmental and spiritual well-being. The biblical injunction of Luke 12:15, “Take heed, and beware of covetousness: for a man’s life consisteth not in the abundance of the things which he possesseth,” is repeated in Mormon scriptures where members are urged to seek first the kingdom of God and to trust not in the

things of the world (see Jacob 2:18–19; D&C 121:35). Fourth, humans have a sacred stewardship to protect and preserve creation for themselves and for succeeding generations (D&C 104:11–17).

The personal stories of how Mormons have come to embrace a strong commitment to environmentalism are wonderful illustrations of the difficulties involved in embracing ecological values in a world where material comforts are so beckoning and high levels of consumption are the norm. Environmentalism challenges our embrace of worldly values such as the pursuit of wealth and the accumulation of worldly possessions. Church leaders have warned against similar threats to our spiritual well-being since the time of Joseph Smith. Of all these principles, stewardship seems to be mentioned most often by essayists who write about how their theology informs their views on environmentalism. Why is this such an important concept to Mormons? One reason might be their belief that, as Eugene England put it, “all God’s creations—including animals, plants, even, it seems, the rocks themselves—have a spiritual existence and identity that can be loved and must be respected.”²⁶ As Adam and Eve were instructed in the creation story, humankind received the charge to care for all of creation. A second reason may lie in Mormonism’s agrarian roots and the way in which early members of the Church were so intimately connected to the land. They knew firsthand the importance of stewardship for their personal survival.

Particularly significant here is the fundamentally important idea that families can have an eternal existence. Mormon theology inextricably connects each generation with those that come before and after it. Latter-day Saints are well known for their intense interest in genealogy and in performing vicarious ordinances in temples, such as baptism for ancestors who lived without the Church. There is a tremendous emphasis on welding generations together, linking them both forward and backward in time through responsibilities and stewardships to seek the spiritual well-being of others. Among the most prominent of biblical scriptures quoted by Mormons is Malachi’s promise that the prophet Elijah would be sent to the earth to “turn the heart of the fathers to the children, and the heart of the children to their fathers, lest [God] come and smite the earth with a curse” (Mal. 4:5–6). While the focus here is a spiritual stewardship, the scriptures also include the idea of stewardship over the natural world.

Theology and Ecology

One of the key issues in environmentalism is the development of an ethic that compels support for changes in attitudes and expectations, such

as replacing the idea of economic growth with ecological sustainability and for specific measures such as higher energy prices that promote conservation and reduce consumption. Changing attitudes and expectations is a tremendously difficult task. Progress has been only very modest at best. Most respondents of U.S. public opinion polls, for example, report they care about the environment, but their support is actually very thin for the measures that are most difficult and essential in pursuing a path of ecological sustainability.

Since theology is such an essential source of fundamental human motivation, it is naturally at the center of humankind's efforts to develop an ethic of sustainability. While sustainability is clearly compatible with the idea of self-interest, especially our interest in ensuring a healthy environment for our own future, it is much more dependent on an ethic of caring for others and accepting the responsibility for how our actions limit or expand the choices of not only those with whom we share the planet now but also those who come after us. Theologians have offered a number of ideas for the formation of an environmental ethic. Thomas Berry argues that the beginning point for an environmental ethic is recognizing the unity of the universe and the sacredness of all life forms. This sense of the sacred must extend beyond the human community to other forms of life that have inherent rights to be respected by humankind. Ancient Greek as well as modern intellectual traditions and sciences have encouraged the belief that all life on earth is to be used to benefit humans. These ideas, as well as misreadings of the Bible, have prevented us from considering that "the human constituted a single sacred community with the natural world that would prosper or decline, live or die, be redeemed or not-redeemed as a single sacred community. Nor could we even consider that the various beings of the natural world had inherent rights to their own proper mode of being that should be recognized by ourselves and incorporated into our ethical teachings."²⁷

The problem is that humans "have always had difficulty in accepting the human as an integral component of the total earth community."²⁸ Instead, we see humans as the only ones who possess rights and all others as existing to serve human interests. As a result of our failing to understand the wholeness and unity of the universe, we lack an ethical framework to help us understand how damage to the natural world damages the human soul as well. Berry argues that indigenous peoples have been able to understand this because their culture and identity are rooted in a cosmology of the universe where natural phenomena such as rain, wind, stars, sunrises, and sunsets shape understanding of the world and humankind's place in it. Believers in the Bible have often failed to make these connections because

of its “emphasis on the perception of the divine in historical events rather than within cosmological manifestation.” The Bible has come to be understood as a “movement from the cosmological to the historical which began with the Exodus experience.”²⁹ As science has developed an understanding of the natural world as coming into being from random processes rather than spiritual roots, humans have become alienated from the natural world. Neither religious nor secular establishments have been able to help us make sense ethically of what we have done to the earth. “Our ethical traditions know how to deal with” violations such as “suicide, homicide and even genocide but, these traditions collapse entirely when confronted with biocide, the killing of the life systems of the earth, and geocide, the devastation of the earth itself.”³⁰ An environmental ethic begins with the idea that the well-being of the entire community of earth is paramount, and human well-being takes place within that broader community.

A second theme is the religious imperative of living simply, seeking spiritual rather than material security, and rejecting the overconsumption that threatens spiritual and environmental well-being. For people of faith, the primary injunction is to seek spiritual values. The pursuit of wealth and consumption diverts believers from more important things. The agendas of environmental protection advocates and people of faith intersect closely here. For many environmentalists, preserving and then experiencing nature leads to spiritual experiences, even if they are not rooted in conventional or mainstream religions. Choosing to live simply creates opportunities to concentrate on enduring values and concerns, whether they be traditional religious experiences or alternative expressions of personal belief. What is particularly admirable about environmentalism is its commitment to ensuring that future generations have the same opportunities enjoyed by the current generation to pursue their life choices.³¹

Third, many American churches see interest in environmental protection as a natural extension of their commitment to civil rights, workers’ rights, and social justice. Environmentalism fits within a social justice movement as it focuses on the distribution of benefits and burdens of modern economic and industrial life. Burdens such as pollution and toxic wastes are not distributed randomly or equally but disproportionately affect low-income communities. Land values are lower in these communities, making them attractive sites for incinerators, waste, and industrial facilities. Since people of color are disproportionately poor, this often ends up becoming an issue of race and justice. Environmental justice advocates have been critical of mainstream environmental groups who have sometimes been all too willing to ensure simply that these unwanted land uses are not placed in their communities, unaware that when undesirable facilities are sent

elsewhere, they tend to accumulate in disadvantaged areas. As a basic prerequisite of justice and fairness, the commitment of these advocates also extends to protecting other forms of life besides human life. Humans have a particular obligation to ensure they act in behalf of the well-being of all forms of life since they alone have the power and opportunity to do so.³²

Fourth, the obligation to future generations is a profoundly moral issue. The United States Conference of Catholic Bishops began its inquiry into environmental ethics by writing, "At its core, the environmental crisis is a moral challenge. It calls us to examine how we use and share the goods of the earth, what we pass on to future generations, and how we live in harmony with God's creation." The bishops emphasize the way in which environmental degradation threatens the "poor and the powerless" and how the poor "suffer most directly from environmental decline and have the least access to relief from their suffering," but the obligation is just as strong to account for future generations. Protecting the sanctity of life requires "protection for all of God's creatures, including the poor and the unborn."³³ Other Christian leaders have voiced similar concerns. One Unitarian minister, for example, said, "Living as we do, we are stealing from our children and grandchildren. It's unconscionable."³⁴

Finally, perhaps the most widespread religious view is that protecting the environment is an essential part of showing respect for creation and reverence for its Creator. "The fundamental relation between humanity and nature," the Catholic bishops wrote, "is one of caring for creation."³⁵ Old Testament scriptures taught that the earth is the Lord's (Psalms 24:1), that the land was to rest every seven years (Leviticus 25), and that all humankind and animals were to rest on the Sabbath. New Testament teachings emphasized the Lord as a good shepherd who watched over his flocks (John 10) and a worker who tended the vineyards (John 15). "To protect the oceans is to do God's work," said Bartholomew I, leader of Orthodox Christians. "To harm them, even if we are ignorant of the harm we cause, is to diminish His divine creation." Pope Benedict XVI argued that Christian belief "commits us to working responsibly for the protection of Creation." Archbishop of Canterbury Rowan Williams said Christians have a moral duty to "celebrate and care for every part of God's creation." The National Religious Partnership has brought together a number of religions in America to work on "caring for all creation."³⁶

Scientists and believers often experience profound differences over environmentalism that are rooted in the conflict between creationism and evolutionary science. This conflict becomes heated when advocates of intelligent design use the language of science and scientific research to prove their creation story and are critical of scientists who do not share their

sense of certainty about this and other complex issues.³⁷ The gap between believers and environmental activists is even greater. Environmentalists who protest the cutting of old-growth forests, like Julia Hill, who lived in a giant redwood for two years to keep it from being cut down for timber, are labeled tree huggers, trespassers, hippies, and worse. Environmentalists' values often appear to be at odds with the modern corporate society and its emphasis on material consumption. As a result, environmentalists are typically marginalized, even sometimes by believers who might be expected to have empathy or even solidarity with those who challenge materialism and consumption. But there are signs this is changing as some protests are now garnering support from middle-class residents who fear that cutting down old-growth forests is "destroying something we don't understand."³⁸

One challenge to the religious argument for environmentalism is that the people in the world who seem to be most engaged in reducing their carbon emissions, conserving energy, and supporting public transportation; who are most committed to solving environmental issues in poor countries and providing access to basic health care for everyone; and who are most generous in providing environmental assistance to developing countries are among the least religiously active. Why is it that the Scandinavian countries, where religion is relatively unimportant, are the world leaders in environmental stewardship? Why is it that Americans, who are among the most religious people in the world, are not leaders in developing an ecologically sustainable society?

Religious commitment ought to include the goal of sustainability, although often it does not. The dominant form of religious-based political activism in the United States has been the Christian Right, but its economic and environmental agenda has been largely shaped by a commitment to the free market and, by extension, the pursuit of self-interest. It is extraordinarily difficult, however, to find scriptural injunctions in support of a self-interested economic agenda, so the Religious Right focuses instead on arguments for liberty and unrestrained economic freedom. But embracing unfettered markets, globalization, and capitalism free from government restraint appear to act against the Christian Right's core teachings of loving others, helping those who suffer misfortune, and preserving community. Bill McKibben put the issue this way: "Since the days of Constantine, emperors and rich men have sought to co-opt the teachings of Jesus. . . . They have invited us to subvert the church of Jesus even as we celebrate it."³⁹ If some people miss the economic argument about the importance of serving the poor, they may also miss the commitment to stewardship and caring for the earth.

Christian Environmental Activism

Religious groups have played a role in building support for a number of issues, such as reducing air pollution and protecting endangered species. For example, because of its belief that the natural world is God's creation and must be protected, the Evangelical Environmental Network (EEN) promotes conservation, environmental stewardship, and scientific research about the importance of protecting ecosystems. EEN also played a key role in blocking efforts in Congress in 1996 to weaken the Endangered Species Act, calling the act the "Noah's Ark of our day."⁴⁰ Evangelical Christians who went to Capitol Hill to lobby against the effort surprised some members of Congress, "especially the conservative Republicans many evangelicals had voted for," but their lobbying was credited with having stopped the effort to weaken the law.⁴¹ The Interfaith Coffee Program encourages its members to purchase only coffee that is "fair-traded"—farmers are guaranteed a minimum price to protect them from price swings characteristic of many globally traded commodities. It also encourages them to engage in ecologically sustainable farming practices. This program has grown to more than 3,500 congregations, only about one percent of the total, but, as individual members also make the modest adjustment in their purchasing practices, it promises to make a difference in the lives of poor farmers.⁴²

Jewish traditions have been at the center of efforts to preserve old-growth forests. The Book of Deuteronomy's prohibition on destroying fruit trees when the Israelites attacked enemy cities prompted a small Jewish congregation in Northern California to try to protect an old-growth redwood forest in the Headwaters Forest. The Maxxam Company had gained control of the forest when it took over the Pacific Lumber Company, but the local congregation's rabbi caught Maxxam's Jewish CEO off-guard when he led an interfaith protest against the company's plan to log the forest. The directors of the company were outraged when the protesters spoke at a shareholders' meeting and asked the directors how the firm planned to make an ethical decision about logging the forest. Other Jewish communities joined the effort, and the company eventually negotiated a deal to protect the forest and log other areas.⁴³

The threat of disruptive climate change has focused attention in the United States on the environmental implications of religious belief like no other. Working to slow climate change is a natural argument for people of faith to make, given their concern about the spiritual threats of materialism and excessive consumption and the notion that the natural world's destruction is an affront to its Creator. Much as religious groups played a

key role in framing civil rights as a profoundly moral issue, they are playing a similar role in promoting political, economic, and social changes that significantly reduce the threat of climate change.

Environmental and religious groups have formed alliances in cleaning up streams and rivers, planting trees, advocating against overconsumption and materialism, and addressing other environmental problems.⁴⁴ Episcopalians in California launched a campaign, the Regeneration Project, to promote renewable energy by encouraging parishes to choose energy generated from renewable sources. The campaign has spread to seven states. According to an EPA analysis, if the nation's 269,000 houses of worship upgraded their energy efficiency, it could produce a reduction of six million tons of carbon dioxide a year and save congregations \$500 million a year. The real impact of such efforts, they argue, will come as members of the churches also promote energy efficiency and renewable energy purchases for their own homes.⁴⁵

In January 2006, eighty-six leaders of the evangelical movement issued a public statement supporting strong policy actions to reduce the threat of climate change.⁴⁶ Their statement made four arguments: "human-induced climate change is real," "the consequences of climate change will be significant and will hit the poor the hardest," "Christian moral convictions demand our response to the climate change problem," and there is an urgent need to act now. Their moral conviction centered on loving God and all he created, being good stewards over the earth, and protecting and caring for the most vulnerable among us.⁴⁷ "With the same love of God and neighbor that compels us to preach salvation through Jesus Christ, protect unborn life, preserve the family and the sanctity of marriage, defend religious freedom and human dignity, and take the whole Gospel to a hurting world, we . . . resolve to come together with others of like mind to pray and to work to stop global warming."⁴⁸

One of the most influential evangelical voices in climate change is that of Sir John Houghton, who is also a physicist and chair of one of the scientific assessment teams for the United Nations' Intergovernmental Panel on Climate Change. He was invited by a fellow British evangelical to meet with U.S. evangelical leaders. The meeting helped generate support among attendees for the statement issued in 2006. He told them that Americans must "cut your own greenhouse-gas emissions, on the fastest time scale you can possibly do. You've got to help China and India develop in ways that are environmentally friendly and don't emit too much, but allow them to develop at the same time."⁴⁹ Similarly, in his 2006 book *The Creation: An Appeal to Save Life on Earth*, E. O. Wilson, perhaps the

world's most prominent biologist, called on believers to join with environmentalists to save creation.⁵⁰

In June 2007, Episcopal, Catholic, Jewish, and evangelical Christian leaders in the United States appeared before Congress to urge action to reduce the threat of climate change. The presiding bishop of the Episcopal Church said, "While many in the faith community represented here today may disagree on a variety of issues, in the area of global warming we are increasingly of one mind. The crisis of climate change presents an unprecedented challenge to the goodness, interconnectedness and sanctity of the world God created and loves."⁵¹

Not all religious leaders agree on the need to take action. The National Association of Evangelicals, for example, has not taken a stand as a whole on the issue of global climate change because other leaders in the movement disagree with the scientists and scientific bodies that have warned against the threat of climate change, arguing instead that human efforts to stop it are "largely futile" and would divert resources from more beneficial efforts.⁵² A Southern Baptist leader argued that "many of us . . . are not convinced that the extent of human responsibility is as it is portrayed by some global warming activists, or that the expensive and dramatic solutions called for will be able ultimately to transform the situation."⁵³ Other religious leaders like Jerry Falwell, Pat Robertson, and James Dobson argued against the movement, saying that climate science was unproven, although Robertson later changed his views and said he had become a convert to the reality of the threat of global warming.⁵⁴

Many religious leaders who have long identified themselves with liberal issues such as reducing poverty and supporting civil rights have found it natural to embrace environmentalism because of its connections with these other issues. What is more significant is that many religious leaders who describe themselves as conservatives and supportive of other traditional conservative political issues have become strong proponents of aggressive climate change policies.

Discussing and Debating Stewardship

Mormon theology reinforces the ideas of caring for creation that are central to the efforts by Christians and others to root an ethic of environmental protection in theology. These believers often use the term stewardship to describe the commitment they feel to honoring the Creator through protecting his creation. Mormons have much to add to this emerging eco-theology, particularly their expansive views about stewardship in using the earth's resources. The idea of a sacred stewardship for the

earth that enables succeeding generations to enjoy the same resources and opportunities our generation enjoys should resonate with Mormons, who see themselves inextricably linked to their progenitors and descendants. For many the connection between environmental stewardship and genealogy may seem tenuous, but in reality they both reflect a way in which we can become more linked across the generations.

One challenge lies in transforming what can be an abstract commitment to future generations into a concrete objective carried out in logical and practical steps. Parents, grandparents, and great-grandparents naturally look to the future of their children, grandchildren, and great-grandchildren as they approach the end of their lives and assess the state of the world. They do not see sacrifice as a burden or a restraint on their personal freedom, but as part of who they are and what they seek to accomplish in life. The achievement of a person's life is intertwined with efforts to perpetuate life. People who have sacrificed throughout their lives for their children and others will not see the sacrifice of ecologically unsustainable consumption and energy as onerous restrictions on their lifestyles but as restraint and good stewardship so that future generations can flourish.

A sense of stewardship can also nurture a commitment to equality, extending to those in the developing world who live with poverty and limited opportunity. Restraint in consumption frees up resources that can be used to alleviate poverty and its attendant problems of poor health; it can also help free people from the incessant demands of materialism so that they can enjoy lives of greater opportunity and choice. Stewardship reflects a commitment not only to intergenerational equity, but to intra-generational equity as well.

A sense of environmental stewardship also encompasses nonhuman forms of life. Each life on earth bears witness of a divine Creator. As the authors in *Stewardship, New Genesis*, and other writings on eco-theology have emphasized, humans can use animals for food and clothing with respect, frugality, and care, so that life is taken not needlessly but with reverence and gratitude, and so that resources are made more widely available.

Embracing a commitment to environmental stewardship is difficult enough, given the tremendous pressures arrayed against such a notion and in favor of materialism and consumption. Developing a personal ethic to govern one's immediate life is obviously the first step, but stewardship should not end there. Environmental threats present not only a daunting set of physical risks to current and future generations but also an opportunity to understand that caring for creation and anticipating the needs of future generations are spiritual values and that these values are threatened now more than at any other time in recorded history. The threats to

the planet from environmental problems like climate change, the loss of biodiversity, and the decline of ocean life are sobering reminders of the stewardship each person has. If we are not part of the solution, then we are indeed part of the problem.

Once our commitment to environmental stewardship is secure, the challenges multiply as we decide which personal and public actions to take. Given the scope of the threats to the planet's health, collective action is essential, but debates over policy options are divisive and pose tremendous challenges. Producing fundamental changes in consumption, energy use, and pollution-generating activities have thus far been impossible within a political atmosphere of partisan competition. Those with a commitment to stewardship will have to wade into the political thicket and work with others—both those who share a similar vision and those who see environmental problems in a different light—to construct workable policies. A commitment to stewardship does not bring with it a specific recipe for action, but it requires a continual effort to devise and deploy solutions for the most pressing environmental problems facing the planet.

A Call for Collective Action

In order to remedy these threats and problems, an unprecedented level of political change will be required, including widespread support for higher energy prices, dramatic increases in energy conservation coupled with decreases in resource consumption, and replacing the dominant expectation of never-ending economic growth with a culture of constraint and limits. While it is possible that technological breakthroughs will obviate the need for such wrenching changes, it is reckless to assume they will occur. Research into such technologies should be accelerated, but just as important is the exploration of how such transformative changes might occur. Given the role that religious belief can play in transforming lives and creating communities capable of collective action, Latter-day Saints should not be surprised to find in their own theology sufficient reasons to support political changes that protect and preserve the environment.

One of the greatest challenges for some members of The Church of Jesus Christ of Latter-day Saints lies in coming to terms with the reality that the kind of collective action discussed throughout this essay suggests an expanded role of government. Many conservatives balk at expanding the regulatory reach of government into their economic lives, preferring to be left alone to work out their own ideas of what constitutes environmental stewardship. But conservatives accept and even welcome governmental involvement in many aspects of their personal lives—for instance, in

curtailing pornography, regulating reproductive decisions, and promoting national security. Because protecting the environment for the benefit of future generations is also a compelling moral imperative, government regulation can be similarly justified if it can create the kind of moral environment conservatives seek.

Both liberals and conservatives who believe that markets are an efficient way to make collective decisions and promote individual choice can agree that an appropriate role of government is to improve market performance by ensuring that prices reflect true costs. Markets are not self-executing social mechanisms but require instead strong and effective policies to ensure that competition is fair, that contracts are enforced, that private property rights are protected, and that a host of other prerequisites prevail. Liberals and conservatives can also share a commitment to conserve and protect the ecological systems on which life depends. Individual, voluntary actions are an essential part of that commitment, but they are not sufficient; collective action is necessary to assure these goals are achieved. A personal ethic of conservation, uncomplicated by the messiness of politics and collective action, seems attractive. Working out the details of political action requires compromise, patience, and time; environmental policies also tend to conflict with other pressing priorities. But our obligations to each other and to those who come after us cannot be discharged by our mere acceptance of worthy goals and true principles. Those obligations require that we plunge into the world of politics and work with others who may disagree with us on many issues in order to find common ground and workable solutions to the problems we face together.

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communities because of low land prices and little political opposition. As a result, community members are exposed to greater levels of hazardous emissions, odors, water contamination, and other environmental risks than those who live in other communities. Or poor people may move into areas where these facilities already exist because housing prices there are cheaper. People of color may have fewer housing choices because of discrimination and have few options other than moving into areas with higher environmental risks. There may also be in poor and minority communities less enforcement, prevention, and mitigation and other efforts to reduce environmental problems because of their lack of political influence. Other communities, where residents have more political clout, are more likely to be able to use their influence to ensure that government officials respond to environmental threats in their communities. See Robert D. Bullard, "Anatomy of Environmental Racism and the Environmental Justice Movement," in *Confronting Environmental Racism: Voices from the Grassroots*, ed. Robert D. Bullard (Cambridge, Mass.: South End Press, 1993), 15–40; Sheila Foster, "Justice from the Ground Up: Distributive Inequities, Grassroots Resistance, and the Transformative Politics of the Environmental Justice Movement," *California Law Review* 86 (July 1998): 775; Evan J. Ringquist, "Environmental Justice: Normative Concerns and Empirical Evidence," in *Environmental Policy*, 4th ed., ed. Norman J. Vig and Michael E. Kraft (Washington, D.C.: CQ Press, 2000), 232–56.

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