

The Catholic Church and Stewardship of Creation

Introduction

As Roman Catholics seeking to be faithful to the fullness of God's truth, we offer the following reflections in the hope that they will shed some much-needed light upon the environmental issues that are currently facing our world. We do not speak here as authoritative representatives of the Church's Magisterium, but only for ourselves as members of Christ's Mystical Body, reflecting upon environmental questions with the aid of Church teaching. This teaching derives its authenticity from its origin, which is Christ himself, and has been passed down to us by the Scriptures, Sacred Tradition, and the teaching office of the Magisterium. By the very nature of the Church's "catholicity," this teaching is intended to be universal in its scope, and, as such, has much to contribute to a proper understanding of environmental stewardship.

Because this teaching represents a two-thousand-year history of reasoned reflection upon divine revelation, it serves as an indispensable point of departure for establishing a deeper understanding of the created order, the nature and ontological value of God's creatures, and, in particular, humanity's value and place in that created order. An authentically Catholic understanding of the environment must be informed by a knowledge of these truths so that we can appropriately respond to environmental questions in a manner that respects the order that God has established. At the same time, a genuinely Catholic approach to environmental stewardship must constantly bring the moral authority of Church teaching to bear on all environmental questions. Thus, in addition to authentic scientific and reasoned analysis, even the most simple choices regarding the environment must be properly ordered to the truth about man and the world that is his home.

I. The Goodness and Order of God's Creation

If one takes the time to study the religious views of many ancient cultures outside the influence of revelation, one will notice how deeply our Western understanding of creation, God, and man has been shaped by the Judeo-Christian tradition. What ancient cultures provide for us are examples of the insufficiency of human reason in trying to penetrate the deepest mysteries of life. Though the religious views of ancient cultures varied, what we see, beginning principally with Abraham, is a radical departure from what we now refer to as paganism. Of the beliefs common among ancient peoples, a number of fundamental presuppositions seemed to figure prominently in their religious belief. For the sake of space, we will list them below:

Polytheism:

- Asserted the existence of many gods.
- Denied that human life has intrinsic value.
- Saw time as cyclical as opposed to linear.
- Lacked the understanding that objective moral norms emanate from the divine and are an essential component of proper worship.

Pantheism:

- Maintained that all of creation is divine.
- Saw time as cyclical as opposed to linear.
- Denied that God is a single, unchanging, perfect, transcendent, and necessary being who is totally above the created order.

Gnosticism:

- Maintained that creation developed out of a supernatural conflict between good and evil.
- Held that matter is evil, while the spirit is good.
- Sought to escape evil by transcending both time and matter.

As Catholics concerned about the environment, we believe it is important to establish the radical difference between a worldview informed by revelation and one that is not. One of the greatest concerns for the Church today in terms of environmental stewardship is the surprising emergence, among some religious and secular environmentalists, of what might be called "neo-paganism." Though the articulation of this new

paganism may be far more nuanced and refined than that of ancient cultures, many of the fundamental philosophical and theological errors remain the same. The distinction between God and his creation has been blurred; man's place in the created order has been obscured, while creation is garnished with characteristics unique to persons alone. Consequently, much of the environmental agenda currently being advanced reflects an environmental ethic that stands in contradiction to the Church's doctrines of God and creation. It is our intention, therefore, to establish an environmental ethic that rests firmly upon the foundation of both sound reasoning and divine revelation.

At the very beginning of the Creed, the Catholic Church professes its belief in one God who created heaven and earth. That Creator, unlike those described in the pagan cosmologies of antiquity, is described as good – indeed, as the only good that is whole and perfect.¹ The opening pages of Scripture also repeatedly emphasize that the Creator looked upon his creation and "saw that it was good" (Gen. 1:4; 1:10; 1:12; 1:18; 1:21; 1:25). Of all his good creation, it is God's creation of mankind that completes the created order in such a way that he pronounces it to be "very good" (Gen. 1:31). The *Catechism of the Catholic Church* reinforces this fact: "*Man is the summit of the Creator's work, as the inspired account expresses by clearly distinguishing the creation of man from that of the other creatures.*"² Human beings are described as part of that creation, as specially created in God's image and likeness, and as endowed with the unique powers of reason and will.

The order that is inscribed into the very fabric of creation reveals to us that not only is everything God created good, but also that creation itself reflects the grandeur of God. In the ancient tradition, the Church Fathers often spoke of nature and Scripture as two divine books. The first shows us some of God's attributes through traces and images of the Creator imprinted on material things. Among these attributes are his transcendence, sovereignty, and marvelous creative power that appear to us in the vast cosmos and the fertile earth with its wonderful assortment of creatures. Even some peoples prior to or outside the influence of revelation were moved by the wonder of the world to intuitions about its origin and how everything had been brought into being. The sheer variety of things led them to speculate about the plenitude of their source. The order and intelligibility they found everywhere seemed a trace of some divine reason or unitive principle operating in all creatures. The world's beauty and majesty spoke of some perfect spirit at work. Stars, seas, mountains, animals, and plants visibly pointed beyond themselves to some invisible reality hidden to mortal eyes.³

The biblical revelation deepened these intuitions still further, placing them on a firmer foundation, and encouraging believers to observe ever more closely the world God had made. The Wisdom Literature and the prophets testified to a profound experience of God's creative power and guidance over the world, and a sense of the awesome responsibility of the human creature. Or, as the Psalmist eloquently describes it:

When I see the heavens, the work of your hands,
the moon and the stars which you arranged,
what is man that you should keep him in mind,
mortal man that you care for him?
Yet you have made him little less than a god,
with glory and honor you crowned him,
gave him power over the works of your hand,
put all things under his feet.
All of them, sheep and cattle,
yes, even the savage beasts –
birds of the air, and fish
that make their way through the waters. (Ps. 8:3-8)

This vision combines the two basic dimensions of Scripture's view of creation: the glory and majesty we may contemplate in what God has made, and our surprising dignity as active stewards of the world, despite our mere creatureliness. This realization has echoed throughout Christian history. Saint Francis of Assisi best expressed the concrete implications of this insight in encouraging his followers to contemplate creation and to praise God "in all creatures and from all creatures."⁴ It is no accident that the Franciscans, who loved and rejoiced in creation more than other religious orders, shaped individuals such as Roger Bacon. Bacon paid careful attention to nature and, as a consequence, figured prominently after the medieval period in the

development of early experimental science.⁵ Thus, in echoing a long-standing tradition, the Second Vatican Council declared that Scripture enables us to "recognize the inner nature, the value, and the ordering of the whole of creation to the praise of God."⁶

II. Christian Anthropology

As the summit of God's creation, man reflects the divine image in a most excellent way. Essential to this divine image is our capacity for reason, which enables us to know God, the world, and ourselves. We are also endowed with the powers of freedom and imagination that allow us to reflect upon our experiences, choose a course of action, and thus become cooperators in the opus of creation. It might be said that we ourselves are co-creators with God, and are consequently privileged in our ability to take what God has created and make new things, which creation, on its own, could not produce. This privilege bestows on us a dignity that surpasses other creatures precisely because we can participate spiritually in God's creativity in a manner that far exceeds the merely physical capabilities of other creatures. Furthermore, because the nature of human action is free and self-determining, these actions have moral value.

It follows, then, that with such capabilities, and by virtue of our dignity, God placed human beings in governance over his creation: "Let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the earth" (Gen. 1:26). This dominion was specified as a command to "till and keep" the garden, and was first manifested in the naming of the animals (Gen. 2:15-20). Since naming something is to know that thing's nature, we see the first manifestation of man's rational nature. Moreover, by the command of the Lord to till and keep the garden, we can assume that man was commanded to use his rationality in the governance of creation for the sake of bringing forth fruit from the earth. As is evidenced by man's original "nakedness," we can conclude that man's dominion over creation was intended to provide us with the means for sustaining and enhancing our existence. This stands in stark contrast to the animals and plants for which God's eternal law has provided physical attributes that sustain their existence. All of this occurred before the Fall, and it constitutes the originating Catholic vision of man's place within the created order.

Alongside these divinely and humanly acknowledged goods, revelation also warns, of course, about profound evils. The story of the Fall in the Book of Genesis explains why evil came into human hearts and societies. As the *Catechism of the Catholic Church* explains,

man, tempted by the devil, let his trust in his Creator die in his heart and, abusing his freedom, disobeyed God's command.... In that sin, man *preferred* himself to God and by that very act scorned him. He chose himself over and against God, against the requirements of his creaturely status and therefore against his own good. Created in a state of holiness, man was destined to be fully "divinized" by God in glory. Seduced by the devil, he wanted to "be like God," but "without God, before God, and not in accordance with God."⁷

The original sin affected every dimension of human life. One of its results is that "visible creation has become alien and hostile to man."⁸ Just as there have been, since Cain and Abel, unjust and immoral relations between persons, so, too, have actions been taken against creation. However, evil is not the dominant force of action in salvation history. God himself entered our world to redeem us through the Incarnation of Jesus Christ. By taking on human nature and restoring its original relationship to God, so began a process of recapitulation for us and the whole cosmos, which is "groaning in labor pains even until now" (Rom. 8:22). This has been accomplished so that we may hope that by Christ's ultimate action, "creation itself would be set free from slavery to corruption and share in the glorious freedom of the children of God" (Rom. 8:21).

We must be clear, therefore, about what dominion does and does not mean. While all things have been subordinated to human beings, we should rule over them as God himself does. This dominion does not grant to us the right to "lord over" creation in a manner incongruous with God's own manner of governance. Since the first moment of creation, God has provided for the needs of his creatures, and, likewise, has ordered all of creation to its perfection. Hence, man's dominion over creation must serve the good of human beings and all of creation as well. Thus, dominion requires responsible stewardship. Such stewardship must uphold the common good of humanity, while also respecting the end for which each creature was intended, and the means necessary to achieve that end. If man exercises dominion in a way that ultimately destroys

nature's creative potential or denies the human family the fruits of creation, such action constitutes an offense against God's original plan for creation.

In thinking about our relationship with the environment, then, we must distinguish carefully between disordered human action, which harms creation and – by extension – human life and property, and responsible action, which the Creator intends for the good of the human family and creation. According to a pastoral statement by the United States Catholic Conference, "As faithful stewards, fullness of life comes from living responsibly within God's creation."⁹ Nowhere does revelation suggest (as do some contemporary religious and secular environmentalists) that creation, undisturbed by human intervention, is the final order God intended. To the contrary, human beings, with all the glory and tragedy of which we are capable, are central actors in God's drama. Indeed, in the history of salvation, the human person and the natural world are never ascribed the same dignity. In the Sermon on the Mount, our Lord himself, while counseling his disciples not to be anxious and to trust in God's providence, assures them that God even takes care of the birds of the air, and adds, "Are not you of more value than they?" (Matt. 6:26).¹⁰ The Scriptures frankly present an ordered hierarchy of being: God rules over all, and human beings serve as his stewards, exercising an instrumental dominion over everything, while also being accountable to him for our exalted position as the rulers of the earth.

Thus, we do rule – and are justified in subordinating and using nature for human purposes, so long as that governance is in accord with the truth about God's creation. As the United States Catholic Conference explains, humans bear "a unique responsibility under God: to safeguard the created world and by their creative labor even to enhance it."¹¹ Hence, the good steward does not allow the resources entrusted to him to lie fallow or to fail to produce their proper fruit. Nor does he destroy them irrevocably. Rather, he uses them, develops them, and, to the best of his ability, strives to realize their increase so that he may enjoy his livelihood and provide for the good of his family and his descendants.

Some would argue that if man refrains from exercising dominion over nature, nature would be better off. Yet the issue bearing the greatest importance is whether man would be better off. When man does not exercise dominion over nature, nature will exercise dominion over man and cause tremendous suffering for the human family. If we were to choose to refrain from exercising our dominion over creation, nature on its own would not necessarily produce the most advantageous outcomes for human well-being. Droughts occur, rivers flood, earthquakes strike, volcanoes erupt, fires start, and diseases infirm, causing harm to humans and other creatures of the earth as well. Why God in his providence allows such things to occur is a mystery bound up with the fact of original sin. The destructive consequences, however, are not so mysterious. Consequently, as rational beings, we have a primary responsibility to protect human life as a duty that acknowledges the dignity of the human person who is created in God's image. Our responsibility to care for the earth follows secondarily from this dignity, and, as such, presupposes it. We alone, of all God's earthly creatures, have the power, intelligence, and responsibility to help order the world in accord with divine providence and thus minimize the effects of natural evil.

III. The Lord of History

In part, man's prominence in creation derives from another dimension of reality revealed to us by God – that time does not exist as what might appear to be a never-ending circle of life. Time is not static or circular. We move through a history that had a beginning and will have an end. In fact, as Scripture indicates, the entire universe progresses along a linear trajectory that moves us closer and closer to some final end when the last chapter of history will be closed. What this might suggest to us is that creation is developing toward a final state of perfection. This is not to say that God's creation was imperfect at the beginning, but that creation is not finished and will achieve its final perfection as it progresses through stages of development until it reaches that end for which creation was intended.

Even recent science suggests that creation began with the "Big Bang," that the universe is perhaps fifteen billion years into its development, and that after billions more, our universe may simply dissipate. Even in secular terms, there is strong evidence for us to believe that nature and human civilization are intended to develop through time. Geology and biology have discovered that the very planet on which we exist is the product of long developmental processes. Almost all the elements on earth were manufactured in earlier generations of stars that burned out, exploded, and distributed their material into the universe. The great diversity of plant and animal species in our biosphere reflects the slow rise of more and more complex and

varied organisms. In the human realm, the growth of civilization, with its patient advances in science, technology, social institutions, and religion, mirror, albeit at a quicker pace, what seems to be one of the central laws of creation – that greater and greater complexity or degrees of perfection take time. What should be noted, however, is just how much faster human civilization has developed by comparison to the rest of creation.

God has revealed that this historic character of creation is, for man, infused with religious significance. Scripture tells us that God, through his word, first created time and space, and then proceeded to make creatures to rule over these realms. Yet he placed man, at the climax, as ruler over the entire order (Gen. 1:3-26). Thus, God was the beginning, and the first cause, of creation, and the principle of authority from whom man receives his vocation to exercise his earthly dominion. Scripture also indicates that we are passing through time from our origin to some final end for which we were created – a final consummation in Christ (Rev. 21: 5-6). Human history, in a sublime way, is unfolding and developing toward a final perfection in God himself. We also know from Saint Paul that Christ came "in the fullness of time" to redeem us (Gal. 4:4), and that he will come again at the end of history to judge the living and the dead (2 Pet. 3:1-10). In Christ, the fullness of God dwells, and in him all things find their fulfillment (Col. 1:15-20). Therefore, linear time and the development it entails are undeniable components of God's plan for us because they place a moral imperative upon man's temporal existence, and thus infuse human life with a more noble purpose. The fact that man was given dominion over the earth suggests that this final state of perfection, both for man and creation, will be achieved, in part, by the free employment of man's creative intelligence and labor upon the created order. In other words, God has commanded that we participate freely and intelligently in furthering the development of his creation. Because God has revealed to us that time has a beginning and an end, we must acknowledge the truth that human dominion over creation is infused with spiritual meaning and religious significance.

In contrast, many of the cultures outside the influence of divine revelation believed that time was cyclical. Such a view followed naturally from simply observing the life cycles of nature. Thus, ancient peoples often viewed creation as an eternal, self-perpetuating, self-sufficient, and self-contained reality. In short, creation was its own perfection. It was man alone who somehow existed outside that perfection and longed to embrace it. One can see a glimmer of truth in such a view. It certainly appears to be that way. Thus, the regularity of the seasons and the recurrence of certain life patterns were the most prominent features of existence.

God's revelation has elevated and perfected that view by situating the cycles of nature within the proper religious context of man's vocation. Thus, the wonderfully rhythmic cycles of creation, in addition to providing for God's creatures, are best understood and respected in reference to man's relationship to God. The cycles of nature and the regularity with which they present themselves reveal a principle of intelligence that draws man's attention to their source. The logic of creation, which can be discerned by man's rationality, helps us to transcend the merely material and guides us on our journey toward ultimate meaning. The ebb-and-flow, life-and-death cadence of nature is a sacrament of the living God that points to an absolute perfection that stands both above and under all things. Were it not for the splendor of creation, man would have nothing to contemplate, and thus, nothing to direct his glance toward God, nor any way of discerning the meaning of his existence.

Therefore, we will not fully understand God's revelation, human nature, or the integrity of creation if we limit ourselves to a cyclical view of time and nature. Just as the marvelous world in which we live came to its present state of development over time, so, too, must our religious and secular knowledge develop toward the fullest understanding of God's plan for us. Noah, Abraham, Moses, and Jesus represent crucial stages in this history of salvation, which unfolds in time. Thus, Sacred Tradition reveals to us that God is not only the Lord of creation, but the Lord of history as well.

Many persons who are concerned about our impact on the environment believe that linear thinking and action violate the Creator's intention of a permanent and stable natural order. However, this is a point where both revelation and man's achievements – particularly in the arena of good science – will correct this misperception. Nature and human society are dynamic systems that depend on both change and continuity for their existence. In any faithful reading of either the book of nature or Scripture, we can see that, despite our concerns about what the short-term environmental effects of development might be, we must continually

raise our eyes to the larger perspectives of God's providence and his intentions for humanity. Environmental stewardship consists in discovering how to properly understand the relationship between cyclical processes and linear developments, present in both nature and human civilization, so that they coexist harmoniously, and direct us toward the ultimate good, which is God himself.

Basing our existence upon cycles alone would be a great limitation on human civilization. The great Christian theologian, Saint Augustine, who was familiar with the cyclical views of antiquity, saw in the Christian vision a great liberation of the human race. He states, "Let us therefore keep to the straight path, which is Christ, and with Him as our Guide and Savior, let us turn away in heart and mind from the unreal and futile cycles of the godless."¹² Elsewhere, Augustine speaks of God as marvelously creating, ordering, guiding, and arranging all things, "like the great melody of some ineffable composer."¹³ As a reflection of this, the human person, who is made in the image and likeness of God, composes, writes, paints, dances, grows food, makes tools, manufactures, and brings forth many new things from the intelligibility inscribed into the very order of creation. Because man cannot create *ex nihilo* as God does, it is precisely the cycles and logic of nature that assist man in exercising his creative inclinations. In other words, while we depend upon the cyclical dimensions of nature for how we develop in our own earthly existence, we have within us the same creative thrust that set in motion the whole history of the universe. In effect, our creativity can bring nature to a higher degree of perfection. Thus, we are faithful to the potential God has placed within us when we affirm what is intrinsically good in nature by developing new and previously unrealized goods.

Interestingly, the Church acknowledges this truth through its liturgy. The very unfolding of the liturgical calendar itself and the celebration of liturgy reflect the times and seasons of the earth, celebrate the products of man's ingenuity, and then suffuse them with spiritual meaning. Every sacrament of the Church affirms God's blessing upon man's dominion over nature by the mere fact that God chose to communicate his grace to us not through the fruits of nature alone, but through those fruits that have been further developed by human intelligence. Thus, even in our worship, we affirm both the value of creation, and the value of man's creativity, which gradually brings all of creation closer to its final perfection.

IV. Human Labor and Human Progress

Not surprisingly, the imperative for human work to meet human needs and restore our fallen world, which is implied by the process of development, appears throughout Scripture. Adam and Eve were given stewardship over the Garden. Cain practiced agriculture, and Abel tended flocks, as did many of the Hebrew patriarchs; and David, the Lord's anointed, was a shepherd before he became king of Israel. In the New Testament, our Lord himself learned carpentry in Joseph's shop, which means that even the holy family had to support itself by humbly shaping wood into useful products. Several of the apostles earned their living as fishermen, and Saint Paul made tents so as not to be a burden to others. Even the holiest of Catholic sacraments, the Eucharist, makes use not of wheat and grapes, but of bread and wine, "which earth has given and human hands have made," thus reflecting the cooperation between God's grace and our labor in the work of salvation.

As necessitated by this tradition, the Church has subsequently placed great value on human labor as perhaps no other religion in history. Though this world is passing, for Christians the material world is not an illusion, as other religions have sometimes maintained. Thus, work and discovery are essential to God's plan for human fulfillment. The very work of salvation history itself has been unfolding here, in time, in space, and in the flesh. Likewise, the world for the Christian is not, as modern science suggests, a mere repository of raw materials and energy to be harnessed toward whatever purposes we feel inclined. To the greatest extent, the value of human labor finds its fulfillment in the discovery of those ways in which nature can be most responsibly and effectively placed at the service of the human family. This is the most authentic definition of human progress.

Christianity's affirmation of human progress is demonstrated throughout history. For example, out of loving attention to God's world, and the value placed on manual labor in the Benedictine monastic tradition, the Western impulse toward material improvements, and the later development of science, partly find their origin.¹⁴ Some of the greatest early modern scientists, such as Galileo and Newton, were Christians who thought of their work as faithfully discovering the nature of the world that God actually made. These observations of the physical world were, in part, made possible by medieval scholastic philosophy and its Aristotelian metaphysics. Had it not been for the work of people such as Saint Thomas Aquinas, the

Scientific Revolution of the fifteenth century may have occurred much later or not at all. From the careful attention and desire to better the human condition that developed within the monastic tradition, eventually spreading into the universities throughout Europe, many valuable developments emerged, and human beings began more fully to understand and express their own God-given role in creation. In our own times, Pope John Paul II has stated,

the earth, by reason of its fruitfulness and its capacity to satisfy human needs, is God's first gift for the sustenance of human life. But the earth does not yield its fruits without a particular human response to God's gift, that is to say, without working. It is through work that man, using his intelligence and exercising his freedom, succeeds in dominating the earth and making it a fitting home.¹⁵

However, a genuine concern has recently arisen that our very God-given capacities may, in fact, be endangering creation. Though man is the summit of creation, our burgeoning powers have made us acutely aware of the particular goodness, vulnerability, and interdependence of all creatures.¹⁶ As Pope Paul VI observed, "The Christian must turn to these new perceptions in order to take on responsibility, together with the rest of men, for a destiny which from now on is shared by all."¹⁷ This new situation, with its new perceptions, calls for a new ethical effort, and further broadening of the Catholic moral vision. The primary Catholic approach to the moral life focuses upon the development and habituation of virtue. Clearly, human action toward the environment must be guided by something more than utilitarian calculations and human wants, especially since those have been distorted by the Fall. How to apply a knowledge of virtue to environmental questions is complex and has only recently begun to be addressed. A full treatment cannot be offered here. However, a few brief suggestions are in order.

At the center of the moral life the Church identifies four cardinal virtues: prudence, temperance, fortitude, and justice. Briefly, these virtues are pivotal for establishing a norm of behavior for human action, and, for our purposes here, those actions which adversely affect the environment:

Prudence: As the mother of all virtue, prudence demands that we reflect deeply upon the highly complex particulars that are involved in environmental stewardship, along with those moral norms articulated in Church teaching. The most diligent application of prudence, however, will not solve all our dilemmas. Nonetheless, by prudently acknowledging the limits of our human knowledge and judgments, we will prevent ourselves from pursuing impossible utopias, and thus proceed cautiously toward the best possible solutions for both the good of the human family and the good of nature. Prudence necessitates humility in the face of complexity.

Temperance: As the virtue that restrains and directs our disordered appetites, temperance has obvious applications for environmental stewardship. It suggests that simplicity of life, self-discipline, and self-sacrifice, as Pope John Paul II has reminded us, "must inform everyday life."¹⁸ Temperance is the virtue required for a proper ordering of consumption.

Fortitude: In earlier times, we needed great courage to face the challenges that the material world posed to our existence. Many of the discoveries that have benefited the human family required individuals to courageously discover the powers and potentials of nature. This tradition continues still, but with little regard for moral norms. While fortitude has often been of tremendous value, it requires that we avoid pursuing technologies that violate the natural law or could result in the mass destruction of nature and the human family.

Justice: As all people are impacted by ecological concerns, justice requires that each creature be given its due in accord with its own particular goodness. Consequently, where tradeoffs are necessary, human need must always be given priority. Wealthy societies are better able to absorb environmental costs, and, therefore, they should bear them; but they should also assist poorer nations in the process of economic development so as to help them secure their own dignity and will. In the long run, such efforts benefit both man and nature.

Some of these points will be touched on later in this essay. Nonetheless, it is clear that, for the Catholic tradition, virtue is an indispensable foundation to understanding how human beings are called upon by God to play their proper role in restoring and developing God's creation in accordance with his original plan.

V. Human Power and Nature's Ways: Some Prudential Considerations

The ongoing process of discovering potentiality in nature and choosing which portions of that potential to actualize, leads us into many complicated prudential judgments. The judgments we make here are not the only prudent conclusions from Catholic principles, but they seem to us the best reflection of sound theology and sound science.

For much of history, human interaction with the environment had few lasting effects. Nature was immensely powerful, compared with the limited capacities of mortal man. It is only the immense growth in human powers in the past few centuries that has made human activity a potential threat to the integrity of creation. Prior to that expansion, people in every part of the world over-fished, over-hunted, over-harvested, polluted, and, sometimes, harmed themselves and their fellow creatures in the process. However, the relative weakness of the human animal in the face of nature's immense power and fecundity made such damage local and transitory. Nature itself has produced much larger disruptions. During the last Ice Age, for instance, which ended only about fourteen thousand years ago, a large portion of the northern half of the globe was covered in ice thousands of feet thick. Forests were scraped clean from the land; few plants or animals survived. Yet the reproductive powers of life on this planet are such that the splendid northern forests we now enjoy reappeared in a relatively short time. Creation itself has a wide range of states as well as enormous regenerative powers when it is allowed to use them.

Some changes push the world into greater complexity and proliferating forms of life; others kill off species – and sometimes even whole ecosystems – without the slightest human intervention. What is often spoken of as the "balance of nature," therefore, is a dynamic balance. Nature changes all the time. In the past, for instance, the earth's climate naturally underwent fluctuations that were faster and larger than even the worst scenarios for manmade climate change. The course of rivers, as well as the locations of forests and of deserts, shifted without ceasing. These forces, which destroy only to create anew, seem to be part of the way that the Creator intended to bring about the intricate and varied forms of life we see around us today. If we think of the balance of nature as static, we will not only have a false impression of the world God has given to us, but we will work against the dynamism of nature and human nature, even as we seek to help both to flourish.

Nature is also sometimes described as a self-regulating system. Again, this is only partly true, and needs to be rightly understood; nature's way of self-regulation raises hard questions for responsible stewardship. Nature achieves balance when one portion takes advantage of opportunities presented by another portion. Big fish eat little fish. Weaker species reproduce in large numbers to offset the losses to predators. None of this, of course, is an ideal model for human individuals and societies to follow. We have concerns that no other earthly creature manifests. Very few of us, for instance, would wish to obliterate the natural beauty and varieties of plant and animal life around us, even if it would entail no physical harm to our own species. A healthy and beautiful environment is one of the goods man values, and, therefore, seeks to promote. By contrast, the HIV virus that causes AIDS does not care if it wipes out all potential animal hosts because the only thing it appears to know is how to reproduce to the limit of available biological niches. Other species seem to behave in essentially the same way.

Despite our natural affection for our fellow creatures on this planet, we need to see them as they are in themselves, and in terms of what they mean for human life. Elephants and tigers, for instance, are marvelous creatures that should be preserved; they tell us something irreplaceable about God's "infinite wisdom and goodness."¹⁹ However, wild elephants and tigers have also been the bane of human existence, as have been viruses, mosquitoes, wolves, bears, sharks, and a menagerie of other creatures. To recognize this is not to license any and every human action over nature. Man's dominion over nature is "not absolute; it is limited by concern for the quality of life of his neighbor, including generations to come."²⁰ Still, persons who live in close contact with nature have a very different sense of its relative mix of threat and glory than do persons who observe beautiful rain forests or wild animals only at a safe distance through television, movies, or with the advantages of civilization to which to return. Nature contains many dangers for the human race, as well as much beauty and benefit. Some religious and secular environmentalists give the impression that it would be better for man and nature if we returned to some previous state, certainly before industrialization, and perhaps nearer to prehistoric conditions prior to settled agriculture. These aims are both wrong-headed and dangerous. Creation becomes benign for man and realizes potentialities built

into it by the Creator to the degree that, through developing his own creative powers, man takes dominion over creation. Left on its own, nature is limited in what it can achieve by its own natural processes. Thus, nature would fail to release the potential God intended for it if not for the instrumentality of human creativity and labor. Furthermore, untamed nature would continue to inflict tremendous suffering on the human family.

VI. A Better Sense of Perspective

The modern concern about the environment, and the very development of the science of ecology, began in the middle of the nineteenth century when human power over creation began to expand rapidly. As we might expect, good and evil were inextricably mixed in this development. On the one hand, industrialization and modern agriculture have enabled more people to live – and live a more fully human life – than ever before. After a difficult transition period, for instance, manual laborers in advanced economies achieved a security and sense of dignity never before seen in any society. Advances in technology have made famine – which was a regular scourge to humanity around the globe before modern times – a thing of the past, except in places where political tyranny or turmoil prevent intelligent development. Advances in medicine have all but eliminated diseases such as smallpox, tuberculosis, and malaria, and have made formerly life-threatening maladies such as measles, mumps, and others, relatively minor nuisances. All of this was achieved by the slow and patient accumulation of human knowledge and the creation of free institutions that enabled the fruits of that knowledge to be shared by even larger numbers of people.

On the other hand, industrialization also had its negative effects. Early industrialization polluted cities, disrupted agricultural communities, and challenged modern nations to find ways to integrate growing urban masses. However, these were largely transitional problems. Today, it is precisely industrialization, new forms of agriculture, and other human advances that are making it possible for humans to increasingly live well and in proper relation to the earth. Even in difficult cases, such as the increase in greenhouse gases, we want to be wary of taking too narrow a view of the matter that neglects a broader perspective on the goods of development. Fossil fuels, which come from beneath the earth, have made it possible for us to forego the far more destructive, inefficient, and polluting use of wood and other so-called natural fuels that must be harvested from the earth's surface. Paradoxically, fossil fuels may have even helped save whales from extinction. Prior to learning how to use petroleum, humans had few alternatives to whale oil for generating heat and light.

Moreover, fossil fuels, such as coal and oil, have also had far-reaching positive environmental effects that a good steward should wish to consider in drawing up the global balance sheet. The first effect is to make it possible for farmers to replace beasts of burden with machines and, therefore, to cultivate land more efficiently. (Much of the developing world is now beginning to undergo this process of agricultural modernization today.) Second, fossil fuels have been turned into fertilizers that, together with new pesticides, other means of preventing spoilage, and advances in new plant species – the so-called Green Revolution – have produced so much more food per acre that large amounts of land have now been spared from cultivation altogether. For example, America's forests, contrary to popular perception, have been growing steadily for the past fifty years and are actually larger than they were one hundred years ago.²¹ Even in the heavily populated coastal areas, small farms have returned to forestland. The result of all this is that despite its vast fossil-fuel consumption, North America currently shows a net minus in the amount of carbon dioxide it puts into the atmosphere. In other words, North America absorbs more carbon dioxide through plants and forests than it emits through industry.²² No one intentionally set out to produce these consequences, but human ingenuity, aimed at doing better with greater cost efficiency and lower amounts of raw materials, seems here to reflect a providential convergence of man and nature. Now that we are conscious of the effects of our activity on nature, we can set out to do even better.

If other countries in the world could imitate such ingenuity and efficiency, we would not see an exhaustion and despoliation of natural resources. Instead, we would see their enhancement and protection. Agricultural scientists have estimated that if the rest of the world could achieve the level of efficiency and care for the land exhibited by the average farmer in the developed world, then ten billion people – which is almost twice the current world population, and is a larger figure than is now expected when the population levels off in the middle of the century – could be fed on half the land. Put into concrete terms, this means that *an area the size of India could simply be left untouched worldwide in spite of population growth.*²³ It is a modern scandal, then, that out of a misguided concern for the earth, some philanthropic foundations and

environmental groups from developed countries, and some international agencies as well, have discouraged, or even refused to support so-called "unsustainable" agricultural practices. These practices are, in fact, necessary for saving and improving the lives of the world's poor and hungry.

Such a position severely clashes with the moral imperative outlined above that human needs must be given first priority in environmental policy and practice. There is room for well-meaning people to disagree about the best set of stewardship policies; and it is rarely the place of the Catholic Church to endorse particular policy proposals. However, we should not indulge ourselves in a strongly negative, almost anti-human view of human population. Unfortunately, environmental policy is often guided by this view – a view that ultimately deplores the appearance of billions of new people on the planet, each of whom, by God's providence, is created to enjoy eternal life with him. Many environmentalists seem to believe that human beings are a kind of scar or cancer on the land, an immoral intrusion on an otherwise perfect natural order. No basis for this view can be found in revelation; indeed, quite the opposite is true. Man was placed here by God and was commanded to be fertile and multiply, to fill the earth and subdue it (Gen. 1:28). Thinking of the existence of other people as unfortunate and perhaps even as a violation of nature is a radical departure from the Judeo-Christian ethic. We are made in God's image and likeness, and that means, in part, that every person conceived is sacred, per se, because he or she adds to creation an incommunicable value that did not previously exist. The view that people are merely a drain on resources not only contradicts our faith, but denies the real contributions of human beings to the common good of human society and the integrity of the environment. God has decided to allow these new persons into the cosmic community of spirits. Any view that does not welcome human beings both in themselves, and for what they may providentially bring into the world, is at fundamental odds with the Catholic ethos.

In addition, the best evidence appears to suggest that no population crisis, as such, exists. Some countries with high population densities are poor because their economic development has not, in fact, matched growth in human numbers. However, countries such as Japan and Hong Kong show that such poverty is an economic rather than a population problem. We have already seen that there is no shortage of food on the planet. There is equally no "population bomb" ready to go off. The predictions of alarmists on this score in the 1960s and 1970s proved false. Only nature or the disregard for human life has produced large numbers of human deaths in recent decades. Globally, food production has outstripped population growth, thanks to human innovation.

However, many human beings still suffer from a lack of basic necessities. Thus, if there does exist an imbalance between population and the amount of arable land, observes Pope John XXIII, "necessity demands a cooperative effort on the part of the people to bring about a quicker exchange of goods, or of capital, or the migration of people themselves."²⁴ Thus, an approach that favors economic development and international cooperation should be promoted as an alternative to programs intended to reduce human population.

Another side effect of development – albeit an unintended one – has appeared as well. As food becomes more plentiful and medicine more widely available, population growth naturally slows. Many developed countries in North America, Europe, and Asia are actually facing precipitous population collapse, absent immigration.²⁵ In developing countries, population growth slows as people become confident that, thanks to material improvements, more of their children will survive into adulthood. Whereas a half century ago, women in developing countries had to bear, on average, six children to keep the population steady, today's lowered infant mortality rate has cut the number of births in half.²⁶ Developing countries today are at the stage of many developed countries more than fifty years ago, with the added advantage of developed technologies and practices already discovered and in use. Thus, addressing the needs of developing nations is well within our potential.

What may block the path to development, however, is mistrust of human innovation, and the inevitable drags on progress that government management of the economy, weak protection of private property rights, and barriers to trade introduce. We know from hard historical experience, for instance, that the centralized, planned systems of the former Communist countries were poor stewards of lands with remarkable natural resources. These countries were not only terribly inept at producing and distributing goods to their own people, they were also among the worst polluters and most reckless environmental regimes in history.²⁷ Despite many laws stipulating production targets and pollution controls, scarcity and environmental

degradation were the result. Command economies and the rigidity they introduce into social relations make the environment a marginal concern. Most government planning tends to produce exactly the opposite of what is intended by hampering or penalizing needed innovations and the dynamic spontaneity to solve problems in both the economic and environmental spheres.

It is a normative Catholic principle that God intended the goods of the earth for the benefit of all.²⁸ In other words, while private property, as Saint Thomas Aquinas notes, is a right, it is not an absolute right.²⁹ Unfortunately, recent attempts to promote the common good by overly centralized planning remind us that, other things being equal, the right to economic initiative and the natural interest we take in our own property play an important social function in both the economy and the environment.

VII. A Proper Understanding of Environmental Stewardship

What becomes clear to us in this analysis is that we need a very sophisticated grasp of our situation that will take into account everything that the sciences – which are a product of human reason – are able to tell us about our world. Yet this is not all; we must also integrate our scientific knowledge with the normative principles of the moral order.

The moral teaching of the Church, as manifested in the various saintly lives of Christians throughout history, remains a key component in our understanding of how we should live in relationship to the material world. These individuals have challenged us to see that it is prudent for us – as both bodies and spirits – to refrain from consuming more than we need, or to coarsen ourselves by the endless pursuit of luxuries. Our tradition challenges us to be very careful in our personal lives about the temptations of worldly goods. Yet what is helpful, and even a religious necessity, in one's personal life cannot be translated directly into a social ethic without some caveats.

The human species as a whole will do better for itself and for creation if we vigorously cultivate the intelligence and creativity with which we have been endowed. This can be accomplished when each person is allowed the economic freedom to seek material improvements, and to make them economically viable within a system that is circumscribed by a strong juridical framework.³⁰ A more expansive social ethic that allows for economic prosperity does not contradict personal austerity, as it may appear at first glance. Large-scale innovation and productivity actually allow for greater efficiency, thus saving raw materials and energy in the long run. As the Catholic tradition acknowledges, proper distinctions are an imperative for moral analysis. Thus, it may be important to generate a lot of wealth; however, what one does with that wealth is quite another matter.

Moreover, while we ought to desire a certain simplicity in our personal lives, returning to some pre-industrial agrarian arrangement would result in the loss of such goods as profitable employment, modern medicine, and a resilient infrastructure, as well as in reduced food production, thus creating an empty well of human need. In times past, human existence was marked by a constant struggle for survival. Only since industrialization has man acquired the means necessary for protecting himself against the forces of nature. Putting the billions of people now alive back on the land would, paradoxically, have even worse environmental effects than intelligent development. Consequently, economic development must progress hand in hand with individual commitment to the virtue of temperance.

Similarly, no responsible person believes that the relatively simpler but dirty old path of early industrialization should be continued in the future. Many environmental problems are already well on their way to technical solutions. Water and air are vastly cleaner than they were only two decades ago, largely due to advances in technology. Manufacturing processes and automobiles may soon have no environmental effects whatsoever. Thus, in addition to the great advances we have seen in agriculture and medicine, we can anticipate that, in the very near future, technologies will continue to provide ways to solve many other problems we currently face.³¹ However, to achieve a reduction in environmental impact, human societies require greater development and more innovation, not less.

Since questions of stewardship, by their nature, reflect great human as well as natural complexity, public policy must reflect the greatest technical skill, practical wisdom, and widest human experience possible. Experience has shown that democratic political systems and market economies, by and large, do exactly that, particularly when moral values and the practice of virtue inform them. Neither of these systems is perfect, and neither will deal with the environment perfectly. Both are subject to the pitfalls of human vice,

fallibility, and original sin – as well as simple error. However, as Thomas Jefferson observed, there is "no safe depository of the ultimate powers of the society but the people themselves." Time has proven the practical wisdom of that principle, and we might observe that it is consistent with the Catholic view that every human person has been endowed by God with gifts intended to be used for the glory of the Creator and of his creation. Democracy and a free economy provide a space for those gifts to be effectively utilized in the stewardship of the earth. It is often argued that environmental questions are so urgent that they cannot wait for a popular consensus to form or cannot depend upon market incentives – which are often focused on short-term gains – for solutions. In a very few cases of demonstrated emergency, that may be true. In almost every other instance, however, far from being inconvenient obstacles to realizing environmental goals, democracy and markets are the most effective social embodiments of our God-given intelligence, and are the best mechanisms for the responsible handling of the environment.

It is no mere coincidence that the words *ecology* and *economics* have related etymologies. *Economics*, referring to the laws of the household (*oikos* in Greek), is the science of how we produce, sell, buy, trade, and use goods and employ services to meet human needs. *Ecology*, a word that came into existence in the nineteenth century as environmental questions became more evident, is the science of the laws that govern the interactions of the earth's biosphere with the earth's inhabitants, specifically as the home (*oikos*) for all life (*bios*). The two terms are deeply related in reality as well as in their origins. Too often, however, they are set in opposition to each other. The usual way this relationship is characterized is by arguing that greed, expressed in economic activity, is the driving force behind ecological problems. Even historically, this is false. The economic actions intended to fulfill human needs have often damaged ecological systems, but to portray these actions simply as greed or excessive consumption assumes that nature is far more benign than the witness of human history seems to suggest. Much of the environmental harm inflicted on nature in the past few centuries has stemmed from human ignorance, not malice or even greed, as we have tried to gain advantage over the nemesis of material scarcity. Yet now that we are beginning to discern the value of our stewardship over nature, we are in a new situation. Thus, we need to reaffirm our commitment to the tools that allow us to respond effectively to the multifaceted problems we face.

First, we need *the very best and dispassionate environmental science* to help us sort out the immensely complicated series of interconnected effects of our actions on the biosphere. Simple emotional appeals or alarmist claims are of little use here. As Pope John Paul II has pointed out, "Reverence for nature must be combined with scientific learning."³² Global warming, for instance, which remains speculative and based on incomplete computer models rather than on demonstrated science, might cost man and nature a great deal if we rush to impose dramatic limits on fossil-fuel use in a misguided attempt to solve a problem that may not even exist. Just twenty-five years ago, some of the current proponents of global warming were warning us about global cooling.³³ Because ecology is still in its infancy, we need to utilize all that we know to help us find prudent solutions for these complex problems. We must also recognize that science alone is insufficient for resolving these matters, especially since these issues have moral implications. Thus, in recognizing that we will have to make unavoidable tradeoffs in striking a balance between human need and a clean environment, we must exercise prudence in addressing environmental concerns.

Finding ways for nature and man to coexist for the benefit of all of creation will demand great human ingenuity and effort in the coming years. At the moment, the simplest solution for many environmental problems is to set aside land for conservation and wildlife habitat. Around the world, the countries that enjoy the greatest prosperity are able, through both public and private means, to set aside land for wildlife preservation. Development and wealth make environmental care much easier, as can be inferred from the fact that intelligent development, which leads to a surplus of wealth, provides the greatest possibility for man to address concerns beyond the scope of his immediate material needs. This fact is rooted in the very logic of man's dominion over nature.³⁴ Despite some continuing environmental problems, developed countries are the ones most dedicated to and successful in treating their own environmental situations.

For the most part, it is not the entrepreneur or the corporation in developed societies, as is often claimed, who acquires disastrous and short-term profit at the expense of the environment. Entrepreneurs usually have a vested interest in their own kind of sustainability, as well as incentives to innovate and to make products more efficiently and with less waste. By contrast, the poorest and least-developed countries

frequently have few real options as their often-growing populations, with little or no incentive to prudent stewardship of their natural resources, exploit every available resource in the search for short-term survival.

The poorer countries of the world are those most in need of good science and development, for both economic and environmental reasons. The traditional forms of agriculture and manufacturing, often romantically thought to be ideal models of how to live on the land, are actually a much heavier burden upon earth and upon man than modern developments. For example, developing countries would benefit both environmentally and economically from electricity. Electricity generated by fossil fuels is frequently portrayed as a clumsy and centralized means of power generation that would best be replaced by wind, solar, or wave-powered generators. If these alternative energy sources were successfully developed and made affordable, perhaps this would be true. However, in the meantime, millions of children and adults die every year in developing countries because of the smoke they inhale from wood and dung fires, or because of the impure water that they must drink for lack of proper sanitation. Thus, their basic needs would be met with far less local and atmospheric pollution by the construction of the most up-to-date electrical power generators around the world. Even if this source of energy is not perfect, it represents an improvement toward both meeting human need and a cleaner environment. Science and development should work in tandem to aid the most hard-pressed of our human neighbors, while taking prudential steps toward a fuller realization of environmental stewardship.

In addition to proper science, however, we desperately need an *authentic democratic deliberation* on the environment. Every recent survey of the American people confirms that they place high value on a clean and safe environment. Yet in human life there are few indisputable absolutes. Thus, we see that most often these same people do not endorse the proposals recommended by many environmental organizations for achieving this seemingly desired end. Real environmental decisions, as we have seen, always involve choices between different and sometimes competing values, therefore suggesting that we must proceed with great caution and prudence.

For example, air quality in the United States is better than it has been in decades. Soon, smog is likely to be a thing of the past. Pollutants are still put into the atmosphere by human activity, but, at a certain point, a moral calculation must be made. Do we want to spend enormous amounts of human and material capital on removing, say, the last 5 percent of an air pollutant at the cost of being unable to deal with other more serious problems? If so, what if the last 2 percent is ten times as expensive? Or a hundred times? Prudence dictates that we need a moral and political calculus that will weigh several competing values as they come to bear upon the common good. Though all of them are perhaps laudable enough in themselves, we must always consider the fact of scarcity when seeking to resolve these conflicts of interest. By virtue of the limits placed on our material existence, we must be modest in our assessment of what we can reasonably achieve environmentally without placing an undue hardship on others. True democratic processes, then, will allow for the real cost and benefits of environmental stewardship to emerge, and thus a policy can be advanced that truly upholds the common good.

Third, in much of the literature on the environment, entrepreneurs and the technologies they employ are pitted against ecologists and the "rights" of nature. There is a kernel of truth in such arguments, because all human activity alters the natural world to a greater or lesser degree. Far from being locked in inevitable conflict, however, *entrepreneurs and environmentalists need increasingly to cooperate* with one another to the benefit of both. Many environmentalists have demonized entrepreneurs. Without going to the opposite extreme of idealizing entrepreneurs – some of whom provide great service, others of whom, in fact, are irresponsible – it is clear that there are several ways in which entrepreneurial activity, at its best, will be crucial to the solution of environmental problems. First, scientific research, both in nonprofit and in corporate settings, depends largely on the excess capital generated by successful entrepreneurs. Entrepreneurs also have a market incentive in developing innovations favorable to the environment, such as new technologies that replace older, dirtier, and less efficient technologies. Only the freedom and responsiveness of markets, as has been demonstrated around the world, will succeed in distributing those goods to the widest number of people. As Pope John Paul II has argued, "the free market is the most efficient instrument for utilizing resources and effectively responding to needs."³⁵ Environmentalists can play a useful role in identifying problems and threats. However, as it stands today, their critiques are often insufficient for addressing the vast array of needs confronting society as a whole. Therefore, embracing a broader view of creation that

credits economic activity as being an extension of God's own wisdom for how man is to relate to his physical surroundings is becoming increasingly important.

Fourth, many environmentalists deplore the right to private property. In contrast, property is upheld in the Catholic tradition, not only as a fundamental right by virtue of man's labor, but also as the means by which God intends man to develop the earth for the benefit of all people. Property that is held in common is most often neglected. In general, he who owns his property will care for it and produce something from it. Therefore, an owner is typically the best steward of a resource. However, the right to private property, in Catholic social thought, can never be understood authentically apart from the universal destination of all material goods. Man is entitled to the fruits of his labor, only inasmuch as he has a right to provide for himself and his family, and the duty to help others in need. Saint Thomas Aquinas provides several arguments for why privately owned property is better cared for than common property or property that is owned by no one in particular.³⁶ In short, he argues that property is temporary and relative in this world. Since its possession requires moral as well as legal limitations, where private property rights have been respected, the whole created order has generally fared better.

Some environmental problems may be *best* treated, in fact, by creating new forms of property rights defensible by law. The law has recognized that pollution damages the common environment and may, therefore, be curtailed in respect to others' property rights. Recently, pollution credits, which are currently being actively traded, have provided successful market incentives to reduce emissions. However, we have not yet experimented extensively with ways to use private-property rights to solve ecological questions. Nonetheless, limited experimentation in this area has yielded positive results. For some places in Africa, for example, establishing property rights over land and animals, and allowing local peoples to benefit from controlled hunting and harvesting policies, have paradoxically lessened poaching and made hunting both economically valuable and sustainable. Previously, people in such areas had immediate incentives to destroy large beasts and their habitats in order to enlarge simple agricultural activities. Innovation that takes advantage of new markets has enabled them to avoid harming nature, to a greater degree, while also benefiting themselves. Whenever possible, as this example illustrates, economic and ecological interests must everywhere be made to coincide as closely as possible with one another.

VIII. Recommendations

In conclusion, we would like to recommend some general principles as guides to future reflection on environmental questions:

1. Nature reveals God as the Creator. Thus, we human beings learn things about God and ourselves from contemplating the earth's power, intelligibility, and beauty. We would do well to know nature better in its immediacy and to cultivate the ancient practice of meditating on nature in order to increase our spiritual understanding and love for God's world. As Pope John Paul II rightly reminds us, "Our very contact with nature has a deep restorative power."³⁷
2. Even natural contemplation, however, will lead us, as it did many early civilizations, to see that nature points to something beyond itself and draws man to the ultimate source of well-being. We care for creation as a God-given responsibility, but the love of neighbor as a being with an eternal destiny is a still higher demand. We should welcome new additions to our numbers by protecting the sanctity of human life – from conception to natural death – and taking all possible steps to see that each person's basic needs are met. The United States Catholic Conference has posed this question: If we do not respect human life, "can we truly expect that nature will receive respectful treatment at our hands?"³⁸
3. Meeting human needs should not be thought of as a zero-sum process that inevitably entails further deterioration of nature or exploitation of neighbor. Creative minds and ready hands can quite easily offset and even reduce the current human impact on creation and can expand man's capacity to meet the needs of his neighbor through voluntary exchange.
4. Ecology and economics must go hand in hand. (Sound environmental stewardship is the joining of the two.) There is an economy of salvation, an economy of human existence, and an economy of the environment. Greater prosperity generally correlates with greater concern for – and better means for dealing with – environmental questions. It also leads to voluntary, non-coercive decisions about having children – decisions that avoid morally illicit means of reducing perceived population pressures.

5. Political and economic liberty best reflect the human freedom and intelligence with which we have been endowed by God. Democratic political systems and free economies, therefore, are most likely to respond to our environmental concerns in the most fully human way. In many cases, this means that finding market solutions to perceived problems will benefit both people and the environment.

6. We should resist the tendency to believe that centralized planning is more environmentally responsible than free institutions. The countries that have had the most centralized systems in the past century have also been the most harmful to the environment. Catholics are not opposed to properly constituted state power, but the issues where clumsy and rigid regulation can help are far fewer than is generally believed. Agile and flexible markets can respond, and with great efficiency, to problems unsolvable in any other way.

7. Entrepreneurship is one dimension of human nature. Portraying all entrepreneurs as people driven merely by greed is both unfair and disrespectful to one of the means God has given us to handle our ever-changing needs. Properly understood, responsible entrepreneurship is a vehicle for realizing what the United States Catholic Conference has called a "common and workable environmental ethic."³⁹ As Pope John II has stated, "Placing human well-being at the center of concern for the environment is actually the surest way of safeguarding creation; this in fact stimulates the responsibility of the individual with regard to natural resources and their judicious use."⁴⁰

Conclusion

The revelation of God both in nature and in salvation history does not lead us to believe that we should return to some prelapsarian garden in the earth's distant past. Angels with flaming swords block that way forever (Gen. 3:24). As Pope John Paul II has pointed out, ecological responsibility "cannot base itself on the rejection of the modern world or on the vague wish for a return to a 'lost paradise.'"⁴¹ Human dominion over nature is not necessarily evil; yet our task lies before us. We must always be on guard against a two-fold temptation that is repeatedly denounced by God: first, making idols of nature or creatures that, in so doing, exalts them above our primary duties toward God; and, second, neglecting the needs of our human neighbor. We are awaiting the New Jerusalem, a city to be given to us at the end of time out of God's free bounty, which will descend upon a New Heaven and a New Earth. In the meantime, we must combat the evil in ourselves and in our world. We must seek better ways to love God by keeping his commandments and loving our neighbor as ourselves. In a sense, the love for our neighbor can be extended to the non-human world. However, we will have to make prudential judgments about many complex questions and expect inescapable tradeoffs along the way. Since "one can love animals" but should not "direct to them the affection due only to persons,"⁴² whenever there is an unavoidable choice between people and nature, we must, like God, put people, the summit of his creation, first.

Finally, we should always have faith that God never abandons his people. Our talents were given to us for a reason: to enable us to love God and our neighbor in Christian freedom. We may be confident that God will also provide us with the gifts and graces that are needed to care for both nature and ourselves. Nonetheless, we should still not expect that any of our many pursuits in the coming years – let alone complex activities such as environmental stewardship – will be without new problems of their own. As the great Catholic theologian Hans Urs von Balthasar has recently reminded us, Jesus said that the wheat and the tares grow together. Believing that we can uproot all evil may threaten the goods on which we all depend.⁴³ Catholic teaching about the Fall is a realistic, not a pessimistic view, in this perspective. There is much bad and much good in our world, but the persistence of evil should not discourage us. Until the Lord comes in glory, total perfection for us as a species and perfect harmony within nature are beyond our reach, but we know that someday he will come. In the meantime, we seek salvation and our human future amid great uncertainties, but also in joyful hope that the Creator who brought this world and the human race into being is certainly still at work in it – and in us.

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Notes

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10. Cf. *Catechism of the Catholic Church* (1994), 342.
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41. John Paul II, "The Ecological Crisis: A Common Responsibility," *1990 World Day of Peace Message* (December 8, 1989), 13.
42. *Catechism of the Catholic Church* (1994), 2418.
43. Hans Urs von Balthasar, *A Theology of History* (New York: Sheed and Ward, 1963), 124—125.