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## Population, Resources, Environment, Family: Convergence in a Catholic Zone?

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### Introduction to the realities we face

Four sets of empirical propositions about the human prospect in the contemporary world have abundant evidence behind them.

Earth's environmental support systems are under serious threat. Destruction of nature and extinctions have accelerated. At the same time, human knowledge of the survival requirements for natural systems and biodiversity is unprecedented and continues to grow. Examples of successful environmental replenishment continue to multiply.

Human greed for resources has been destructive, historically. Human consumption or destruction of natural resources has reached a critical level across much of the planet. Simultaneously, careful resource practices have emerged or been recovered, and technological change renders some former key resources unnecessary or valueless.

Total human population is at an all-time high and is almost certain to increase further. These additional people will have basic resource consumption needs. A significant part of the recent human population increase, especially of the past couple of centuries, is due to great success in reducing death rates and extending healthy life spans. Human fertility rates are decreasing globally. Many, if not most, human societies are failing to reproduce themselves and have done so for more than a generation. All the conditions necessary for dramatic population contractions of many parts of the human family are now in place.

Human families are social-cultural-spiritual ecosystems, proving hardy and resilient under the proper conditions, and fragile with tragic consequences when subjected to abuses, whether old or new. New assaults on the integrity of the family, and even the concept of the family, continue to appear. The natural human family, and particularly the Christian family with its intrinsic logic of self-sacrificing love, is socially de-valued in

many aspects of the dominant Western culture. The self-confident and effective citizens (those who will build the environmentally sustainable societies) of tomorrow will come disproportionately from generous families open to life.

Superficially, and certainly as popular cultural “wisdom,” one or several of these propositions appears to be in contradiction to others. Population is increasing but reproduction failing? Large, pro-life families are saving the environment? Those things can’t be true simultaneously, can they?

The Catholic Church appears to be the main, or perhaps the only, candidate as a norm-setting institution that believes in the accuracy of the four sets of propositions, which, after all, are supported by the weight of available evidence. Further, the Church is the only global institution that, at least to some degree, acts as if it believes these things by what it teaches and what it does—of course allowing for the normal failings and contradictions of the human condition. So the Catholic Church, in this sense, is a crucially important, reality-based organization. This is in stark contrast to the vulgar taunts the Church has always faced about the implausibility of spiritual realities it definitively defends. It is also probably safe to say that a large number of environmentalists are unaware of the Catholic commitment to meeting environmental challenges. But perhaps there is room to believe that may change.

The Catholic Church, as a result of recent reflection on timeless principles now codified as part of the Magisterium, including in the encyclical *Laudato Si’* (built solidly upon papal teachings of St. John Paul II and Pope Emeritus Benedict XVI), has developed a mature and penetrating body of teaching about the human person, the family, and our relationship to the created environment we inhabit. None of it is revolutionary in the sense of introducing novel moral principles, despite what some enthusiastic, but fringe, elements within the Church may wish. Rather, this emerging subject area of the Magisterium simply reflects an application of Divinely-revealed moral wisdom to an evolving world. The Church has done this a number of times in its long history.

As the industrial revolution emerged in the 19th century, the Church reflected on the new realities, culminating in Pope Leo XIII’s encyclical *Rerum novarum* (literally meaning *new things*; idiomatically meaning *political innovations* or *revolution*). Today, the Church is bridging moral issues and realms of thought that are usually not regarded or treated as related, especially in the areas of environmental stewardship and protection, the appropriation of natural resources, human demography and the family, and man’s relationship to the Divine. This is not a strained interpretation. In *Laudato Si’*, Pope Francis stresses the need to seamlessly deal with these issues:

If the present ecological crisis is one small sign of the ethical, cultural and spiritual crisis of modernity, we cannot presume to heal our relationship with nature and the environment without healing all fundamental human relationships. Christian thought sees human beings as possessing a particular dignity above other creatures; it thus inculcates esteem for each person and respect for others. ... A correct relationship with the created world demands that we not weaken this social dimension of openness to others, much less the transcendent dimension of our openness to the “Thou” of God. Our relationship with the environment can never be isolated from our relationship with others and with God. Otherwise, it would be nothing more than romantic individualism dressed up in ecological garb, locking us into a stifling immanence. (LS, 119; emphasis added)

But, if there is more depth, especially spiritual, to the Catholic perspective than environmentalists are willing to credit, that very fact makes Catholic teaching relating to the environment less superficial and dispensable than others may wish. If regard for the environment is not merely a nod to popular political opinion among elites, but is part of an entire integral relationship between the human person and all reality—physical and spiritual—then such regard is a constituent part of essential Catholic and Christian belief, properly understood. To assert this is not to provide a mandate that all Catholics must endorse a set of radical environmental actions. But it does not represent an excuse for indifference or callousness toward the condition of our common environment either.

As with so many other controversial issues or dilemmas facing the human person, the distinctive Catholic “both/and” approach offers a way out of the sterile “either/or” stalemate. The fact that abortion is the unjust taking of innocent human life and can never be morally justified (*LS*, 120), especially not for abstract notions of population control to theoretically benefit the “environment,” is uncomfortable to many environmentalists. Analogously, the fact that humans have received a Divine injunction to exercise responsible care for creation (Gen 1:21–33) [1] or that the three most recent popes were personally persuaded that climate change is partly caused by human actions and thus requires an appropriate social response (*LS*, 23), makes some conservatives, including Catholics, uncomfortable. This very specific characteristic of “a sign of contradiction”—a manifestation of holiness generating intense opposition (Luke 2:34, Acts 28:22)—according to St. John Paul II can be taken as “... a distinctive definition of Christ and of his Church.”[2]

## Who is in charge here?

An important question is whether the Catholic Church brings something unique to the intersecting issues of population, environment, and family. Of course, it is still early, but there are already a few signs of awareness that, in fact, the Catholic Church has developed a unique contribution to these issues. Whether her contribution is rightly understood is another question. Some seem to perceive the Church’s role in merely strategic secular terms: the Church’s role primarily is that of a big and potentially powerful global institution that might be useful in pushing a few political measures over some hurdles and into adoption if it just signed on to make a really big coalition. Most of the newfound enthusiasm for the Church by environmentalists, such as it is, is based on a belief that with the promulgation of *Laudato Si’* the Church has merely signed on to a political/social project that is largely their own. Conservative and traditionalist Catholics fear and complain that that is so, perhaps taking their cue from some of their adversaries.

The concern of conservatives is reasonable enough, particularly because of the longer perspective that the Church takes on these matters. Having the Church serve as a cheerleader for a secular project is trivial, and worse, potentially a dangerous detour from its spiritual and sacramental mission. Jesus himself taught that the realm of the civil government and the Church were distinct (Mk 12:17, Mt 22:21). Yet the Church has always held that as it pursues its mission, individuals, peoples, cultures, and entire nations will be transformed (Mt 28:19). As that transformation reaches a critical point, it will inevitably take on a public, social, and ultimately political character. As is usually the case, clarity on the most profound issues can be found in the writings of Pope Benedict XVI—arguably the greatest theologian-pope ever. A particularly instructive reflection on these points can be found in [Pope Benedict’s address at Westminster Hall](#) during his 2010 visit to the UK.

The central question at issue, then, is this: where is the ethical foundation for

political choices to be found? The Catholic tradition maintains that *the objective norms governing right action are accessible to reason*, prescinding [separate] from the content of revelation. According to this understanding, the role of religion in political debate is not so much to supply these norms, as if they could not be known by non-believers—still less to propose concrete political solutions, which would lie altogether outside the competence of religion—but rather to help purify and *shed light upon the application of reason to the discovery of objective moral principles*. This “corrective” role of religion vis-à-vis reason is not always welcomed, though, partly because distorted forms of religion, such as sectarianism and fundamentalism, can be seen to create serious social problems themselves. It is a two-way process. Without the corrective supplied by religion, though, reason too can fall prey to distortions, as when it is manipulated by ideology, or applied in a partial way that fails to take full account of the dignity of the human person. Such misuse of reason, after all, was what gave rise ...to many other social evils, not least the totalitarian ideologies of the twentieth century. This is why I would suggest that the world of reason and the world of faith—the world of secular rationality and the world of religious belief—need one another and should not be afraid to enter into a profound and ongoing dialogue, for the good of our civilization. (emphasis added)

So the Church, on matters of secular knowledge such as the development of effective environmental policies, defers to those with expertise in that area. Lay men and women whose vocation is in the world are responsible for freely thinking, debating, and governing in the secular realm.

On the other hand, a law or policy that unjustly and deliberately harms the innocent or the structure of the family is a matter that directly concerns the Church’s mission. Especially when a cold rationality inflicts unjust harm in the name of a greater good, the Church’s role is to purify the reasoning and support the dignity of the human person. To serve as a brake on the popular passion for ethical shortcuts requires an institution that is more or less a permanent sign of contradiction, always scorned and seen as dangerous by somebody. For nearly a century, numbers of people, often in influential positions, have believed strongly that the environment would gain and the poor (or the unpopular) themselves would be better off if abortion were widely and easily available. Now numerous international organizations or programs work diligently to implement this “vision.” The mission of the Church includes countering this kind of thinking directly, as it involves a glaring exception to the principle of concern for vulnerable life that supposedly undergirds environmental protection (*LS*, 120).

## Starting at the Beginning

Secular environmentalists have an affinity for nature. When pressed for an explanation of why others should as well, the typical response usually amounts to “enlightened self interest.” Recent Church documents recognize environmental stewardship as a weightier moral question than simple prudence. The Catechism of the Catholic Church (CCC), for instance, treats environmental issues in part as issues of justice, falling under the rubric of the Seventh Commandment, “Thou shalt not steal” (CCC, 2415–18). Degrading the environment literally steals from future generations, without means of redress.

The rationale the Catholic Church offers for humans to be in right relation with creation stems from the notion of covenant. Covenant theology is deep and multifaceted, well beyond the

scope of this article. But the basic outline is apprehensible enough. The Church regards herself as the most recent body created through a series of covenants. Covenants are not mere contracts—the exchange of property or promises. A covenant involves the exchange of *persons*. The covenant exchange is so complete and definitive that a new *reality* emerges. The covenants proceed from the covenant of creation by God (and procreation between Adam and Eve), to the covenant between God and Noah, Abraham, Moses, David, and the new (renewed) and everlasting covenant through Jesus—the Church from the Eucharist. As St. John Paul II put it in the opening of his encyclical *Ecclesia de Eucharistia*:

The Church draws her life from the Eucharist. This truth does not simply express a daily experience of faith, but recapitulates *the heart of the mystery of the Church*. In a variety of ways she joyfully experiences the constant fulfilment of the promise: “Lo, I am with you always, to the close of the age” (Mt 28:20), but in the Holy Eucharist, through the changing of bread and wine into the body and blood of the Lord, she rejoices in this presence with unique intensity. Ever since Pentecost, when the Church, the People of the New Covenant, began her pilgrim journey towards her heavenly homeland, the Divine Sacrament has continued to mark the passing of her days, filling them with confident hope. (emphasis in original)

At each new stage of the unfolding of salvation history, the Divine/human covenant family is enlarged. Starting with the primordial couple it expands to a household, a tribe, a national collection of 12 tribes, a kingdom nation, and finally the family becomes *catha holos* (of or relating to the whole, entire)—the Catholic covenant family of God. To a secular environmentalist this would seem like a tangent, but it has immediate, and dramatic, application in answering the question of what humanity’s relationship is to the created order. Scott Hahn describes the clear and stark answer to that question in quoting Pope Benedict:

He expresses the meaning of the creation account in a series of statements: “Creation is oriented to the sabbath, which is the sign of the covenant between God and humankind. . . . Creation is designed in such a way that it is oriented to worship. It *fulfills its purpose* and *assumes its significance* when it is lived, ever new, with a view to *worship*. *Creation exists for the sake of worship.*” [3] (emphasis added)

## You do it your way, and I’ll do it mine

Again, a secular environmentalist could conceivably make a less-than-fully enthusiastic nod toward this creation-covenant-worship premise as simply a data point, the cultic belief of a rather large group of religious believers affected by a *catha holos* self-concept. Fine as far as it goes, but so what? The relevance of it all would seem to be lost on secular observers. In their view, the environment is being destroyed by unrestrained human greed (recognized in *LS*, 204). So, the pressing need is for effective action, strong political organization, and cultural transformation—to the degree it can be accomplished—on behalf of environmental protection measures. This analysis is not necessarily at odds with the Church’s perspective. But it is not the heart of the matter for the Church.

The grounding of concern for the environment in the spiritual is the premise at the very

opening of Pope Benedict's 2010 World Day of Peace message:

Respect for creation is of immense consequence, not least because “creation is the beginning and the foundation of all God’s works,” and its preservation has now become essential for the pacific coexistence of mankind. Man’s inhumanity to man has given rise to numerous threats to peace and to authentic and integral human development—wars, international and regional conflicts, acts of terrorism, and violations of human rights. Yet no less troubling are the threats arising from the neglect—if not downright misuse—of the earth and the natural goods that God has given us. For this reason, it is imperative that mankind renew and strengthen “that covenant between human beings and the environment, which should mirror the creative love of God; from whom we come and towards whom we are journeying.” (emphasis added)

Of course, there are a number of spiritualities on offer in the world today, and new forms emerge regularly. A popular formulation, especially among the younger generation, is that they self-identify as “spiritual but not religious.” The Church regularly finds common interest with those who are spiritually seeking, as well as those who have no interest at all in the spiritual. But *Laudato Si’* makes a pointed observation about Catholic and Christian covenant spirituality: It is the only secure basis for building an ethic of environmental responsibility in society.

A spirituality which forgets God as all-powerful and Creator is not acceptable. That is how we end up worshipping earthly powers, or ourselves usurping the place of God, even to the point of claiming an unlimited right to trample his creation underfoot. The best way to restore men and women to their rightful place, putting an end to their claim to absolute dominion over the earth, is to speak once more of the figure of a Father who creates and who alone owns the world. Otherwise, human beings will always try to impose their own laws and interests on reality. (*LS*, 75; emphasis added)

Even if this claim in *Laudato Si’* is not accepted at face value, or rejected on a personal basis, it might well prompt a least a second thought from the bemused secular environmentalist observer. The accusation that Christianity is a uniquely destructive influence on treatment of the environment has been a sub-theme of the sociology of environmental protection for a long time,<sup>[4]</sup> however fanciful. But that accusation avoids the question—what actually is a firm and durable basis within human societies for responsibly using and caring for the created order that they exist within?

Social fads that seem to support environmental protection measures rise and fall over time. They are compelling within a society for a time, and then they aren’t. The temptations of short-sighted carelessness or greed toward the environment are permanent. Establishing environmental protection on the basis of social popularity renders it vulnerable to the shifting winds of public opinion; no authority is left to challenge environmental exploitation. Responsibly caring for the environment while meeting human needs, on the face of it, seems to demand an ethic grounded in an all-powerful, un-appealable, permanent authority that seeks human good, but is above short-term human interests. Enlightened self-interest and coercive

power and propaganda fall short of the mark, because ultimately they are subject to overthrow.

While Christians can and do fail in putting their responsibilities into practice, they cannot overthrow the One to whom they are ultimately responsible while claiming to remain Christians. If we cannot philosophize our way out of our responsibilities, sooner or later we must face them. To paraphrase Chesterton, “A man who won’t believe in God will believe in anything.” So, the Church’s potential cooperators in the environmental arena have good reason to acknowledge, at the least, that the Catholic Church’s moral/spiritual system represents a “useful” approach. It may be only grudging and partial respect, but it can be a start.

It’s easy enough to get carried away with concern for the environment. The young are especially prone to do so. But how is a responsible balance to be achieved? Some have even suggested conferring legal rights (in the tradition of Western legal systems) on nature. Inevitably this would set up a situation pitting objects of nature against actual persons. In reality it would be *human persons claiming to represent objects of nature* versus other human persons. The Catholic perspective offers a basis for refraining from doing so.

Only humans have moral and legally enforceable duties. No animal, plant, landscape, or river can ever be morally accountable for anything. The basis of this reasoning is beautifully captured in John Paul II’s [statement to the Pontifical Academy of Sciences on Evolution](#).

The conciliar constitution *Gaudium et spes* has given us a magnificent exposition of this doctrine, which is one of the essential elements of Christian thought. The Council recalled that “man is the only creature on earth that God wanted for its own sake.” In other words, the human person cannot be subordinated as a means to an end, or as an instrument of either the species or the society; he has a value of his own. He is a person. By this intelligence and his will, he is capable of entering into relationship, of communion, of solidarity, of the gift of himself to others like himself. St. Thomas observed that man’s resemblance to God resides especially in his speculative intellect, because his relationship with the object of his knowledge is like God’s relationship with his creation (*Summa theologiae* I-II, q. 3, a. 5, ad 1). But even beyond that, man is called to enter into a loving relationship with God himself, a relationship which will find its full expression at the end of time, in eternity. (par. 5)

## Can’t we all just get along?

Following the thread of theological and spiritual logic by which the Catholic Church confronts the issue of the environment can seem puzzling to people formed within the modern Western, secular culture.

The Church, rather than setting (and continually re-setting) an exact and always-expanding and changing secular agenda of measures to be implemented, provides moral guidance within its comprehensive spiritual/theological framework. The lay members of the Church, in their

diverse stations in life and their particular God-given talents, have the vocation of providing solutions to environmental challenges; these are prudential matters. The engineer or corporate team members who will provide practical breakthroughs in renewable energy may just now be nurtured in a family. The farmer, miner, fisherman, or scientist who will develop and implement better ways to provide basic resources are today grappling with and appropriating to themselves an understanding of human purpose and the call of the Divine. The Church supports the family and forms its members so that they understand their responsibilities. The Church provides the “purification” of moral clarity in how they will go about their work. This perspective is explicit in *Laudato Si’*, but is clearly not offered as an excuse for complacency.

On many concrete questions, the Church has no reason to offer a definitive opinion; she knows that honest debate must be encouraged among experts, while respecting divergent views. But we need only take a frank look at the facts to see that our common home is falling into serious disrepair... (*LS*, 61)

As is often said these days, politics is downstream from culture. And, as contemporary society increasingly needs to be reminded these days, culture is downstream from religion—or its absence. A society governs in ways that echo how it worships. A provident God who has entered into a relationship of loving communion with humanity calls for a different relationship to the created world than a bleak, cold, random universe devoid of purpose or love.

In an important sense, those concerned about sustaining, protecting, or restoring the environment, whether secular or indeterminately spiritual, arrive at a goal that is at least broadly compatible with Catholic teaching. Certainly, they are likely to do so by a different route and possibly with different motivations and priorities. Acknowledging that the teachings of the Catholic Church are derived as a matter of consistent logic from its basic premises is reasonable. Doing so does not require acceptance of the faith proposition—that the premises are real and the Church is correct. Still, this provides ample grounds for cooperation with the Catholic Church in achieving important environmental goals for the common good. An entire section of *Laudato Si’* is devoted to the principle of the common good.

Underlying the principle of the common good is respect for the human person as such, endowed with basic and inalienable rights ordered to his or her integral development. It has also to do with the overall welfare of society and the development of a variety of intermediate groups, applying the principle of subsidiarity. Outstanding among those groups is the family, as the basic cell of society. (*LS*, 157)

But, as can be inferred from the overshadowing character of the cited section of *Laudato Si’* (157), there are important qualifications on what the Catholic Church can morally do in environmental collaboration. Most potential partners with the Church do not have the same (or any) compunctions about measures that the Church finds morally objectionable, especially across the spectrum of pro-life and family issues. In a coalition, resources are fungible. An understanding is easily reached that the resources of the coalition can be allocated so that what one partner “can’t” do, another will “take care of.” This would be morally compromising. Direct cooperation with moral evil is not permissible.



It seems that the Church will need to maintain clearly identifiable, and in many cases separate, activity in a number of its environmental projects where such issues arise. It will require both moral clarity and courage to resist the social pressure and, as is increasingly being experienced in democratic societies, the coercive power of civil authorities, to fall in with the spirit of the times. Maintaining integrity is, in a real sense, a witness to the “sign of contradiction.” The anti-Catholic direction of events on such morally tinged matters is no surprise, and the wonder is that the Church has not done more to prepare for the opposition and oppression to come.

## The population prospect

To many, the most significant irritant in a potentially budding rapprochement between the Catholic Church and the mainstream of environmentally minded individuals is the fact that generosity and openness to life in marriage that the Church determinedly promotes appears to exacerbate the perceived problem of “overpopulation” and its environmental effects. In some ways, the issue is largely resolved, and increasingly is the opposite of what popular opinion holds. The great increase in human population came in three stages. High birth rates and high death rates were the universal lot of early humanity. When knowledge and social capacity brought the benefits of increased and secure food production, specialized labor, and basic medical care/sanitation, birth rates remained high while death rates plunged and standing populations increased dramatically. As death rates declined, social feedback signaled that lifespans were more secure and birth rates declined. The latter was supposed to be the final stage.

But now most humans live in societies where completed fertility rates (average number of surviving children per woman at completion of reproductive life) are well below replacement levels and have been for more than a generation. Fertility rates have fallen globally and consistently, even in societies with above replacement-level fertility. One could (and certain individuals clearly should) go into great detail in tracking the continuing evolution of human fertility, health, and mortality, both regionally and globally. The number of new children born per year is nearly stable now, well below replacement level except for sub-Saharan Africa and South Asia. So a reasonable prospect is for an increase in total human population of a few billion over the next several decades (as the success of health measures lengthens life spans for the first time in many societies), but with a marked tendency toward aging in most places. Many societies are already struggling with the challenges of supporting unprecedentedly old populations by relatively few young people, and in-migration of young from elsewhere. We can expect an intensification of these trends. After two generations of low fertility, the shrinkage in the number of women of child-bearing age makes the prospect of rapid rebound to population replacement-level fertility quite difficult and even unlikely. That is the population challenge in much of the world.

For some reason, academic ecologists, a key source of expertise driving popular perceptions and attitudes about the environment, largely have not been diligent about keeping up with the changing demographic situation. More expertise is available than ever before on the condition of particular species, important ecosystems, and even global environmental monitoring. Much of the news from these studies is not good, and some is alarming (guaranteeing prominent media coverage). But the favored explanation remains that human population increase is the threat.

To be fair, in some places expanding human numbers will put pressure on the capacity of ecosystems or resources such as water. But in many cases those issues are aggravated mainly by population shifts and changes in ways of life, to say nothing of social disorganization. In reality, the needs of a substantial share of the (largely older) people who will increase the human population can and will be accommodated from existing human infrastructure. The challenge increasingly will be to find a floor or end to the exceptionally low fertility in many societies. Those societies that are successful in doing so will be renewed, if they are under fair and just economic and political systems. They are likely to become sources of vigorous innovation, wealth production, and commitment to the future that are the key to sustaining environmental progress.

It may seem a bold prediction, but at some point social thinkers and opinion leaders are going to highlight the need for an effective institution to promote formation of adequate numbers of stable, responsible families generously committed to raising up children who are deeply connected to their society and attuned to concern for the poor and the future. Even ecologists and environmental activists are going to be affected with concern about how to perpetuate their academic, professional, and social institutions. And when they do, they will find a ready ally in the Catholic Church.

Summing up, a potential reconciliation between the Catholic Church and some of its sharpest critics is possible. Of course, human pride and stubbornness will interfere. But the Church has considered the signs of the times, and faithful to her charism and tradition, she has reached deep into the storehouse of perennial Divine wisdom entrusted to her care (not “wisdom” produced on demand), and responded to *rerum novarum*. Starting with an openness to living in right relation to God and creation, she is forming her members to be the solution to the challenges of life—environmental or otherwise—in the created order. This vocation is strengthened and sustained by communion with Christ, who has redeemed the world from futility. As lay members of the Church reproduce themselves through the family (the most God-like thing they can do) they ensure that the Faith remains living. Broad areas of cooperation in secular projects with a variety of actors are possible, but the Church must sometimes act under a distinctive identity so as to avoid moral compromise.

There are challenges to many in this cooperation. Conservative Catholics must exercise their distinctive charism in constructively engaging environmental issues. They have much to offer in guarding against the pitfalls of nature worship, relativism, abandonment of Christ, the abortion trap, anti-family attitudes and others. Environmental activists are challenged to acknowledge the genuine strengths of the Catholic cosmological and theological view as a contributor to the common good in the environmental arena, even if they do not embrace it personally. Genuine diversity sometimes means working together when it is important and possible, and sometimes maintaining the integrity of honest and respectful difference.

Given the gravity of the challenges our common home faces, perhaps it is not too much to hope for, if not complete harmony between the Catholic Church and the environmental movement, some level of convergence with the Catholic vision.

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[1] Steffen, Lloyd H., “In Defense of Dominion,” *Environmental Ethics* 14 (1992): 63–80.

[2] Wojtyła, Karol, *Sign of contradiction* (Seabury Press, 1979).

[3] Ratzinger, Joseph Cardinal, *In the Beginning: A Catholic Understanding of the Story of Creation and the Fall*, trans. Boniface Ramsey (Grand Rapids, MI: Eerdmans, 1995 [1986]), as cited in: Hahn, Scott W., “The Authority of Mystery: The Biblical Theology of Benedict XVI,” *Letter & Spirit* 2 (2006): 97–140.

[4] Noss, Reid and R. Sanjayan, “Perspectives on Natural Areas and Conservation,” *Natural Areas Journal* (2016) 36: 243–47.

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