Natural Law and Ecological Responsibility: Drawing on the Thomistic Tradition

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We live in dramatic times. History has accelerated in the modern period as the human population has surged and our scientific and technological powers have produced an expanding juggernaut of production and consumption, which have had an increasingly vast and often damaging impact on most ecosystems around the globe. Just when we have most needed attention concentrated on humanity’s relationship with the natural world, the dominant schools of modern western philosophy and Christian theology have become so fascinated with human subjectivity, historical

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agency, value and interests that they have problematically come to view the human as sharply separated from the rest of the natural world.

Humanity’s powers of action have advanced to such an extent that we can, and do, transform natural habitats into monocrop agro-ecosystems, clear jungles into ranches, and increase endangerment and extinction rates. We now burn so much fossil fuel in the advanced economies (Europe, North America and Japan) and the surging economies of the developing world (China, India, Latin America and the Middle East), that we threaten to change the long-standing climate patterns on which whole ecosystems and their species depend. As this has occurred throughout the last century, the major schools of modern western philosophical and theological movements have also separated humanity from nature. They became human-centered in their focus and assumptions and functionally fell silent regarding humanity’s close relationship with, and growing responsibility for, the rest of the natural order. Yet, precisely because of humanity’s surging population growth and burgeoning technological and industrial powers, we need careful reflection on our complex and potent relationship with the rest of the natural world.

I argue that the rise of ecological sciences and our awareness of the scale of environmental problems in the last forty years has offered us a great gift in opening our eyes to the need for a fundamental paradigm shift—a shift in our thinking about the human condition, human responsibilities, our relationships to the rest of nature, and God’s relationship to humanity and the rest of the non-human world. Increasingly, ecological findings suggest that our “modern” human and history-centered Catholic and Protestant forms of theological expression are inadequate, which is to say that we need to embrace “postmodern” views.

Which “postmodern” views? Two, quite distinct, postmodern options exist. The first option, the “social construction of reality,” attracts the most attention and conversation in university circles, and is highly human-centered and stresses cultural differences. It is anti-foundationalist and holds an anti-universalist epistemology that acknowledges how all truth-claims are thoroughly perspectival. It also encompasses a deep sensitivity to the plurality of valid truth-claims rooted in the plurality of disciplines and the world’s diverse cultural and religious histories and traditions. This dominant stream of postmodern deconstructionist thinking centers its attention on the categories of “culture,” “history” and “texts,” and rightly foregrounds the radical differences between and among the diverse human cultures, histories and textual traditions. However, across this same period of the ascendancy of postmodern deconstructivist views and across various sectors of the intellectual world, there arose a divergent stress on the shared ecological grounding of all human cultures. Whereas postmodern deconstructionist views place sharp emphasis on the differences between human cultures, the second option of “ecological postmodernism”
highlights species- and planetary-wide ecological histories, needs, vulnerabilities and threats by locating human cultures within a commonly-shared planetary frame. In short, postmodern deconstructionism centers its understanding of the human condition in history—in the diversity of humanity’s historical agency in culture-building—whereas ecological postmodernism understands that human history is sustained within a planetary order of ecosystems that have a complex and evolving history of their own. Both attend to the dynamism of human history and agency, but they relate this focus to different frames of reference.

These two postmodernist views diverge strongly. Postmodern deconstructivist views tend to distrust pre-modern philosophical and theological traditions as arrogant in their affirmations of a dominant metanarrative, which asserts its universal privileged world-picture or metaphysical account. Ecological postmodernism, however, critiques modernism with its robust anthropocentrism and affirmation of unlimited technological and industrial progress. Ecological postmodernism instead finds much wisdom in pre-modern traditions across the globe because they tend to understand the human condition in a nature- or cosmos-centered frame, rather than the history-centered frame favored by the modernist school.

In short, as ecological postmodernists critique the modernist industrial and technological assumptions hard-wired into much discourse about scientific, human and economic progress, they feel a strong affinity with pre-modern communities living in utter dependency on the natural environment. What postmodern deconstruction dismisses as archaic and quaint, ecological postmodernism engages with deep appreciation: people’s historic ordinary practices to sustain themselves in their local environments. From the perspective of ecological postmodernism, the dependency of human communities on the natural order has changed little across the millennium. We, today, and they, long ago, were and are sustained by an environing planetary ecosystem. Only the scale of human numbers, resource demands and scale of degradation of the planet’s ecosystems have changed and, in the last two centuries, changed massively. In this respect, both ecological postmodernism and most pre-modern thought-forms share a

1. CHARLENE SPRETNAK, THE RESURGENCE OF THE REAL: BODY, NATURE AND PLACE IN A HYPERMODERN WORLD 64–79 (1997); see also REINVENTING NATURE?: RESPONSES TO POSTMODERN DECONSTRUCTION (Michael E. Soulé & Gary Lease eds., 1995); POSTMODERN ENVIRONMENTAL ETHICS (Max Oelschlaeger ed., 1995).

deep appreciation for a nature-centered frame for understanding the condition of human history, agency and moral responsibility.

It is an exciting time in which we live. We have a range of the most current scientific studies about how life is sustained on Earth, and these studies push us to appreciate many of the same values and perspectives of many pre-modern understandings of life within the planetary natural order. While many postmodern deconstructionists bristle in angry reaction to notions of this normatively weighty "natural law," for most ecological postmodernists the language of "nature's law" seems appropriate, serious and quite relevant.

I. THE RISE OF CHRISTIAN ANTHROPOCENTRISM AND THE RECOVERY OF CREATION

Some follow Lynn White Jr. in arguing that Christian thinking, since its very first centuries, has been anthropocentric and dominationalist in its stance toward the non-human natural world. Others, like Elizabeth Johnson, have noted that the historic record is more complex. They hold that while Christianity has privileged the intrinsic value of human life over that of animals, plants and the rest of nature, it has balanced this with a robust affirmation that human life remains a part of God's creation. As such, it needs to be understood within a nature-based or creation-centered frame.

I argue that the rise of modern science, with its mechanistic account of the nonhuman natural world, was a major factor in focusing Christian thinking around humanity's fundamental separation from nature due to its distinctive rationality, agency and subjectivity. Core streams of western philosophy and Protestant, and later Catholic, theology came to accept a picture of a bifurcated universe divided between a sphere of persons and a sphere of things. This dualistic metaphysical picture came to concentrate Christian theology and ethics more robustly on the value of the human, while ceding the nonhuman natural world over to the purview of the natural sciences. However, even as important streams of twentieth-century Protestant and Catholic theology and ethics became vigorously anthropocentric, the emergence of the ecological sciences began to highlight humanity's evolutionary heritage rooted in the natural order; our ongoing dependency on the well-being of natural ecosystems; and our rising destructive impact on these ecosystems and their myriad animal and plant species.

If the rise of the modern mechanistic world-picture was, in part, responsible for the fundamental separation of Christian thinking between humanity and the natural world, then the rise of the ecological world-picture in the twentieth and twenty-first centuries holds promise of renewing appreciation for much creation-centered Christian thinking. In short, if a key theological and ethical problem arose in our modernist assumptions about the "thingification" of the natural world, then post-modern ecological awareness might be the catalyst for engaging the pre-modern Catholic heritage with its natural law traditions, monastic theologies and practices, and Medieval giants of theology and piety—Aquinas, Bonaventure, Francis and Claire, Hildegard, Eckhart and the rest—with fresh excitement and new eyes. An engagement with contemporary ecology can guide a most helpful recovery of nature- and creation-centered pre-modern philosophical and theological reflection. Ironically, a retrieval of medieval creation-centered thought-forms could prove to be a crucial catalyst in helping to mobilize the global Catholic community toward a commitment to genuine ecological responsibility. The work of Aquinas offers powerful inspiration in this historical bridge-building work. His powerful vision arose out of his courage to embrace both traditional theological commitments and the very best science of his day. If we wish to follow in his lead, we need to similarly place our religious, ethical, legal and economic reflection in light of the best and most relevant science of our day, namely the ecological sciences—those sciences that are trying to save our planet.

Catholic reflection on environmental law can directly recover many critical insights and moral perspectives of the medieval natural law, which may be quite helpful for advancing our ecological responsibilities. However, the recovery of natural law is complicated by the view of many Catholic theologians and ethicists that natural law is primarily a set of affirmations about the structures of human reason. While some highlight Aquinas’s hierarchical and human-centered perspectives, these are strongly balanced out by his over-arching, theocentric and creation-centered vision. His system starts and stops with God; God is the prime mover and ultimate end. We instead need to recover the robust physicalism of the “Great Chain of Being”—a vision of reality with ancient and Medieval roots holding that all levels of Being are good, related one to another, and together make up what Aquinas called “the perfection of the universe.” This is a profoundly

important perspective for an age facing planetary-wide and severe ecological threats.

II. HIGHER AND LOWER PULLS ON THE GREAT CHAIN OF BEING

The history of western philosophy and Christian theology is filled with efforts to define the human against what we are not—namely “animals” or “angels.” When the range of the created order is understood as arrayed in a “Great Chain of Being,” it is quite easy to understand each level of being by concentrating on the features that distinguish it from the level of beings above and below. Aristotle played an important role in shaping Western thought in this grand classification effort. In his writings he tended to define the human by that capacity that differentiates us from other living species.9 Thus, even though he classified the human as the “rational animal,” his concentrated attention to humanity’s essential unique capacity provided backing for others across the centuries to enshrine in Western thought a high concentration of philosophical and religious attention to humans’ distinct “rationality,” not our “animality.”10 Indeed, though Aristotle’s definition of the human as “rational animal” was nicely balanced—attending to both that we share with, and distinguishes us from, other animals—over the centuries the balanced emphasis came to be replaced by a heightened concentration to that which differentiates us from animals.11

As Christian theology developed in the Middle Ages, its dominant schools tended to balance both strong emphases on the doctrine of creation even as they stressed a hierarchical vision of the “Great Chain of Being,” which privileged beings with rational souls—angels and humans—over those with animate or sensate souls or mere vegetative souls.12 Medieval Christian theologians following the great focus of the Hebrew Scriptures (especially Genesis, Exodus, Deuteronomy, Job and the Psalms) could not help but understand the human as part of the great expanse of God’s crea-


10. ARISTOTLE, supra note 9, at 16, § 1098a; see also NUSBAUM, supra note 9, at 264–89 (providing a superb account of Aristotle’s ethics); MARTHA C. NUSBAUM, ARISTOTLE’S DE MOTU ANIMALISM 24–55, 59–106 (1978) (providing a helpful analysis of Aristotle’s method of species classification).


12. Aristotle, Politics, in 2 THE COMPLETE WORKS OF ARISTOTLE § 12561b (Jonathan Barnes ed., 1984); see also AQUINAS, supra note 8, at 247, q.47, a.2 (following Aristotle’s hierarchical ranking of the human above all other creatures); LOVEJOY, supra note 8, at 58–59 (discussing Aristotle’s broad influence regarding the hierarchy of being); GEORGE LAKOFF & MARK TURNER, MORE THAN COOL REASON: A FIELD GUIDE TO POETIC METAPHOR (1989).
tion, all of which, of course, is held as “good” and indeed directly willed into being by God. However, this prominent affirmation of the centrality of the creation doctrine was wedded to an equal and sometimes stronger emphasis on the hierarchical character of humanity’s privileged status by virtue of our unique capacities of reason and agency. If the authority of the Hebrew Scriptures required an affirmation of humanity’s participation in the community of creation, then potent neo-Platonic, Stoic and Aristotelian traditions leant great authority to those who privileged humanity over the rest of creation due to our unique rational agency. Indeed, this stress on the uniqueness and superiority of humanity over nature was supported throughout the centuries by sustained appeal to the passage in Genesis I, which holds that humanity has been given “dominion” over all of the rest of creation and indeed has been charged to “subdue the earth.”

The historic reification of a hierarchical vision was given great impetus by a gradual association of “humanity” with “rationality” and “animals” with “beasts”—the untamed, the wild, the uncontrollable. Indeed, a dominant understanding of the human self found in the writings of Plato, Kant and others depicted the self as torn between pulls “upward” by our rational and angel-like nature and “downward” by our animal-like propensities. In this perspective, humanity is the microcosm that reflects the macrocosm of the “Great Chain of Being.” We are the center that conjoins the class of beings with rational souls—angels and humans—with the class of beings who have physical bodies. Indeed, the greatness of humanity lies in our serving as the critical link between the sphere of rational souls and the ma-


14. See Aquinas, supra note 8, at 993–1161, q.90–114; see also Augustine, supra note 13, at 96, 193 (emphasizing that humanity “surpasses the brute beasts” by virtue of humanity possessing rationality and being uniquely created in the imago Dei); James M. Gustafson, 1 Ethics from a Theocentric Perspective 87–113 (1981); William French, Christianity–Roman Catholicism, in The Encyclopedia of Religion and Nature 328–332 (Bron R. Taylor ed., 2005).

15. See Gustafson, supra note 14, at 87–113; see also Santmire, supra note 11.


19. Lovejoy, supra note 8, at 79 (labeling humanity as the “middle link”); see also Aquinas, supra note 8, at 375, q.76, a.3.
terial universe. Humanity pays a price for this central position, however, in our struggle between the pulls of rationality and the “animal-like” pursuits of physical pleasure.

Historically, hierarchical vision of a “Great Chain of Being” suggested that the origin of evil arises when humans gave into their “beast-like” side. Sinfulness and evil were depicted as occurring when our rational nature fails to discipline and control our “beast within.” This “beast” threatens to be unleashed through sexuality, drunkenness and gluttony—animal-like or “bodily” drives and lusts. This Western understanding of the human can be seen both in ancient and many contemporary accounts. It has potent staying power. As Mary Midgley rightly observed, this tradition over the centuries came to employ the category of “animality” and “beastliness” as a conceptual foil for “humanity,” “humaneness” and rational agency.

Though Aristotle once defined the human as the “rational animal,” over the centuries the term “animal” came to be associated in dominant philosophical and theological traditions with disorder and sinfulness. Similarly, the “Great Chain of Being” vision affirmed, following the most ancient affirmations of the doctrine of creation, the fundamental goodness of creation all the way down; yet, over the centuries the fundamental goodness of “animals” and “beasts” came to be associated with violence, uncleanness and unbridled lusts. In this way, a tension developed within the notion of “animality.” On one hand, the “Great Chain of Being” affirms the fundamental goodness of animal life and plant life. However, as “animality” over the centuries became a categorical foil for defining humans by what we are not, it is not surprising that over the centuries a strong bifurcation between the “human” and the “beast within” came to reify a sharp

20. ANNE PRIMAVESI, SACRED GAIA: HOLISTIC THEOLOGY AND EARTH SYSTEM SCIENCE 122–131 (2000); see also Gerald Verbeke, Man as a ‘Frontier’ According to Aquinas, in AQUINAS AND PROBLEMS OF HIS TIME 197, 215 (G. Verbeke & D. Verhelst eds., 1976) (providing a treatment of the human as microcosm in the work of Thomas); POPE JOHN PAUL II, LABOREM EXERCENS (ON HUMAN WORK) 10–13, 55 (1981) (describing the human activity of work as the action of subjects shaping and working on the natural world, or a field of objects, and finding that human work allows humans to participate as “co-creators” in the divine work of ongoing creation).

21. See KANT, supra note 18, at 163–64.
22. MIDGLEY, supra note 17, at 25–49.
23. Id. at 40–45.
24. Id.
25. Id.
26. Id. at 25–49.


29. See LOVEJOY, supra note 8, 45, 55–59, 82; see also AQUINAS, supra note 8, at 229–256, q.44–49.
dualism between the sphere of humans and the sphere of animals and plants.\textsuperscript{30}

Medieval giants such as Thomas Aquinas, Francis of Assisi, Bonaventure and Hildegard of Bingen present a complex array of theological affirmations. They generally affirm the expansive goodness of all of creation, the location of humanity as a part of the created order, and a stress on humanity as having a unique and distinctive value—uniquely created in the image of God, uniquely having rational agency, and uniquely charged by God in Genesis to hold "dominion" over all of creation.\textsuperscript{31} They combined a creation-centered frame for understanding the human with a strong emphasis on the hierarchical arrangement of creation and humanity's unique position of superiority, and based on the human's unique rationality and rightful dominion.\textsuperscript{32}

In this historical context, it is not surprising that the bulk of theological and ethical attention has come to concentrate on the distinctiveness and value of the human. Humanity's numbers were low and our technological and industrial impact was relatively weak; the order of nature seemed imperturbable by comparison. The expanse of the average human life in Europe during the Medieval period was short and the natural order—the Alps and the great Pyrenees, the forests of what is now Germany, the great rivers, the Atlantic and Mediterranean waters—seemed so vast and firmly established that they were understandably taken as immense "givens."\textsuperscript{33} With human life obviously vulnerable and the surrounding natural order seemingly so dependable, over time theological and ethical attention began to take the order of creation for granted and concentrated concern and attention on the distinct value of the human.

III. The Rise of Modern Science and the Conceptual Separation of Humanity from Nature

A significant historical factor in the further attenuation of the Christian theological and ethical concentration on the doctrine of creation occurred during the rise of early modern science in Europe. For three quarters of its history, Christianity had predominantly understood human existence in a creation-centered frame.\textsuperscript{34} Surely the stress on our participation in a great

\textsuperscript{30}See Rosemary Radford Ruether, Men, Women, and Beasts: Relations to Animals in Western Culture, in Good News for Animals?: Christian Approaches to Animal Well-Being, supra note 28, at 12–21; see also Rosemary Radford Ruether, Sexism and God-Talk: Toward a Feminist Theology 72–92 (1983).

\textsuperscript{31}See Aquinas, supra note 8, at 229–324, q.44–64; see also Bonaventure, The Soul's Journey Into God, in The Classics of Western Spirituality 59–78 (Ewert Cousins trans., 1978) (1259).

\textsuperscript{32}See French, supra note 14, at 328–33.

\textsuperscript{33}See Norman F. Cantor, The Civilization of the Middle Ages 478 (1993) (noting that the average life expectancy was in the thirty-year range for medieval Europeans).

\textsuperscript{34}Johnson, supra note 5, at 3–21.
community of creation was balanced by a potent and sometimes stronger emphasis on our hierarchical superiority to the rest of creation.\textsuperscript{35} However, the authority of the “Great Chain of Being” world-picture became attenuated in the face of the rise of early modern science in western Europe, propelled by the creative genius of Isaac Newton, Galileo, Francis Bacon and others.\textsuperscript{36} They collectively established a new paradigm for understanding the non-human natural world and humanity’s relationship to that world.\textsuperscript{37} In place of the “Great Chain of Being” with its affirmation of fundamental goodness and continuous ontological linkages, the Newtonian scientific world-picture established a new portrait of the non-human natural world as a vast mechanistic sphere, the movements and behavior of which could be explained by the regularity of physical forces in motion.\textsuperscript{38} This Newtonian description of the non-human physical world as a vast machine strongly reified the sense of a fundamental divide between the human and the non-human world in dominant philosophical and theological movements in the early modern and modern periods.\textsuperscript{39}

In the writings of Isaac Newton, Descartes, Francis Bacon and Kant, a conceptual wall was erected between the physical world—understood as a mere machine, a thing, dead, mere matter in motion—and the world of humans—self-directed via rationality and enjoying freedom, subjectivity and agency.\textsuperscript{40} Increasingly, this perceived divide between humanity and the rest of nature became described by a whole series of polarized metaphysical dualisms.\textsuperscript{41} Humanity is said to have “rationality,” “agency,” act in “history,” and be thus a “subject,” a “person;” for Kant, an “end-in-itself.”\textsuperscript{42} Animals, plants and ecosystems, by contrast, are said to lack rationality and hence “agency.”\textsuperscript{43} The animal behavior is said to be determined by instincts, with plants and the rest of nature determined by “natural cycles,” mere physical and biological forces.\textsuperscript{44}

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\item \textsuperscript{35} See French, supra note 14, at 328–29; see also Johnson, supra note 5, at 3–21.
\item \textsuperscript{37} Merchant, supra note 36.
\item \textsuperscript{38} Id. at 275–89.
\item \textsuperscript{39} See id. at 192–252.
\item \textsuperscript{40} John Herman Randall, Jr., The Making of the Modern Mind 253–81 (1940); see also Immanuel Kant, Foundations of the Metaphysics of Morals 46 (Lewis W. Black trans., 1969).
\item \textsuperscript{41} Ruether, supra note 30, at 72–92.
\item \textsuperscript{42} Kant, supra note 40, at 46.
\item \textsuperscript{43} Mary Midgley, Animals and Why They Matter: A Journey Around the Species Barrier 45–73 (1983); see also Bernard E. Rollin, Animal Rights and Human Morality (1981).
\item \textsuperscript{44} See Bernard E. Rollin, The Unhearded Cry: Animal Consciousness, Animal Pain and Science (1989); see also Midgley, supra note 17, at 51–82; French, supra note 28, at 24–43.
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IV. Nature's Fragility and Nature's Power: Ecological Stability and Global Security

Our core ecological problem lies in humanity’s widespread refusal to commit, nation-by-nation and people-by-people, to tangibly restraining our widespread practices of production and consumption that are so disruptive to the planet’s ecosystems, its array of animal and plant species, and its climate system and weather patterns. While, of course, we must applaud the real leadership of Norway, Spain and other countries on wind power advances, and many European nations for their imposition of significant fossil fuel taxes, and Iceland for its advances in geothermal technologies, most nations give far greater priority to economic growth and military security than ecological protection. For deeply entrenched historical reasons, the peoples of most countries still view ecological issues as separate and distinct from either economic well-being or national security.

However, as ecologists have been arguing for three decades now, economic growth may only be sustained by channeling it in ways that respect the basic structures and physical dynamics of the planet’s various ecosystems and food-chains. In short, human economic well-being depends on respecting and defending the integrity and stability of ecosystems. Economic well-being in the middle-range and long-term depend on ecological well-being and stability. Sadly, short-term profit and market share concerns are forceful incentives that lead many corporations to discount concerns about the long-term. In the United States, the powerful lobbies of auto manufacturers, oil companies, highway construction companies, the American Automobile Association, and others have together encouraged policies of widespread highway construction, low gas taxes and suburban sprawl patterns that have helped undercut funding for public transit and


trains and locked many Americans into a daily life pattern requiring long commutes and the world’s highest per capita appetite for fossil fuel use.\(^50\)

Likewise, the history of the United States and that of many other nations has shaped us to be on guard against any hostile powers’ military threat and to see our insurance policy as lying in massive “defense” spending.\(^51\) Sadly, history has so concentrated national attention to potential military threats, and now terrorist threats, that ecological concerns continue to be squeezed out of most discussions at the White House, the Pentagon, Wall Street and Main Street regarding what counts as genuine national security needs.\(^52\) Accordingly, Americans in general have grown quite accustomed to accepting the argument made decade after decade for the need for vastly high military spending, while at the same time becoming enraged if any governmental leader dares to call for increased gas tax hikes to help promote incentives for Americans to cut back on our fossil fuel consumption and reduce global warming and climate change potentials.\(^53\)

Many ecological scientists have been arguing for the last twenty years that ecological threats need to be understood as genuine national and global security threats so that policies of environmental protection and climate stabilization can be understood as genuine top national priorities. In the last few years, the arguments of the ecologists are beginning to be heard.\(^54\) After Hurricane Katrina’s devastation of New Orleans, it is harder for Americans to ignore how global warming may be increasing the violence of hurricanes and how floodwaters and high winds can cause massive harm to the health and well-being of American communities. Likewise, Al Gore’s book and documentary coupled with a new report from the United Nations Intergovernmental Panel on Climate Change have similarly helped create a new widespread respect for the gravity of climate change issues.\(^55\) Indeed, this summer’s remarkably unprecedented retreat of Arctic ice has given rise


\(^{51}\) See Michael T. Klare, Deadly Convergence: The Arms Trade, Nuclear/Chemical/Missile Proliferation, and Regional Conflict in the 1990s, in WORLD SECURITY, supra note 46, at 170–96.

\(^{52}\) See KENNEDY, supra note 46, at ix–x, 3–20, 129–34.

\(^{53}\) See Editorial, Lame-Duck Budget, N.Y. TIMES, Feb. 5, 2008, at A22 (arguing that President Bush’s proposed 2009 U.S. military budget of $515 billion does not include the cost of prosecuting the war in Iraq or the conflict in Afghanistan); Michael Janosky, Democrats Eager to Exploit Anger Over Gas Prices, N.Y. TIMES, Apr. 21, 2006, at A1.


to new concerns that global climate change is occurring more quickly than most models predicted.  

In attempts to mobilize people to protect the planet, environmentalists often stress nature’s increasing fragility and the vulnerability of many animal and plant populations and wilderness ecosystems. This is in contrast to a portrait of striding human strength. Let us not be fooled, however. Planetary ecosystems may be vulnerable in certain ways, but, given human society’s dependency on the well-being of nature’s support systems, we need to understand that nature also contains a potent awesome strength. If we continue to push climate change potentials and the sixth great planetary extinction event, then we run the danger of unleashing a whirlwind of forces—ecosystem degradation, species extinction, extreme weather events, ocean rise—that will surely redound to human detriment.

In order to make peace with creation, Barry Commoner and other ecologists have argued that we first need to acknowledge that some of our dominant human practices are functionally making war with the planet. Stewardship responsibilities require that we make “peace with the planet” through the prudent restraint of human practices that irreparably damage global ecosystems or destabilize climate patterns. The Catholic Church, the members of which comprise roughly one-sixth of humanity, bears a heavy burden of responsibility for calling its members to engage, in a sustained and serious manner, in these globally shared ecological challenges.

V. Ecology and the Moral Equivalent of War

William James, in his 1910 essay “The Moral Equivalent of War,” called for the eradication of war because of the rise of horrific new weapons, but he wanted to sustain what he called the “manly virtues” of courage and self-sacrifice that he saw as positive outcomes of humanity’s warring past. His solution was to secure peace among nations by having them draft their young people into a common crusade against a common foe, namely nature. He envisioned an international conscription of young people to join in “the army enlisted against Nature.” Their pride and confi-
dence would be enhanced in what James celebrated as the "immemorial human warfare against Nature." It is clear that James held a Newtonian vision of nature as a vast and stable realm, a grand and solid "given," and a passive field that cannot strike back at human incursion.

However, we know today (in ways James could not) that nature is not a passive realm but a potent, dynamic field of forces and system of vast energy that reacts in complex and sometimes destructive ways to human practices that disrupt ecosystems, species and climate patterns. Where James envisioned a war against nature with no human casualties but only benefits accruing to humanity, the ecological sciences remind us that such a posture of "warring on nature" will generate, much like a real war, potentially massive numbers of human and nonhuman casualties. We know that such a war against nature is folly, for we depend upon nature's well-being for our own.

For too long governments and societies have said that ecological sustainability is important, but they have regularly allowed other priorities to trump environmental concerns. This is, in part, because environmental threats have not yet been broadly accepted as posing serious national and global security threats.

If the planetary ecosystem is recognized a vast "superpower," then respect for the seriousness of the security risks posed by ecological threats can be mobilized. How is nature a superpower? This term derives from the discourse of strategic theory and international relations developed to describe the distinctive power of the United States, Great Britain and the Soviet Union during World War II. The term quickly came to be employed again during the Cold War to highlight the historically unique raw powers posed by the American and Soviet nuclear arsenals. Nature, the planet's ecosystems, can also be understood as a superpower. In the positive sense, nature is a superpower because all the goods and services of the world's economies are derived from its environmental resources, food chains and energy flows. However in the negative sense, nature is a superpower be-

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65. Id. at 13.
66. See id.


cause it holds a potent "retaliatory capacity" against human abuse. Nature does not, of course, have a command center to launch a nuclear strike, but nature surely has potent reactive capacities to human actions that impinge upon it. These kick-back capacities can severely damage human communities—all societies, all national economies, and future generations.

VI. TWO MODERN TURNS: THE TURN TO THE SUBJECT AND HISTORY

Though the dominant worldview of pre-modern peoples was prominently shaped by attention to the surrounding natural order,71 modernity has shifted its understanding of the human from a nature-oriented frame to a history-centered one. The ancient vision of a vast "Chain of Being" highlighting humanity's participation in, and relatedness to, the entire fabric of the cosmos has been turned on its side and historicized into a "March of Progress" marked by societal and intellectual advances across the generations.72 For societies that experienced the rise of modern science with its attendant advances in technology making possible both the industrial revolution and rapid population growth, it is not surprising that their thought-forms would come to concentrate increasingly on the dynamism of human agency and historical change—not on the stability and cycles of the environing natural order.

A similar repudiation of "nature" and turn in emphasis to "culture" and "history" can be found in the rise of dominant streams of modern Western philosophy and Christian theology. Many followed Immanuel Kant's "turn to the subject," which concentrated attention to the distinctiveness of human reason that sets us apart from all other life forms and gives us distinct powers of agency and intentionality.73 The rise of phenomenology, existentialism and personalism in the first half of the twentieth century in privileging the focus on human subjectivity and agency similarly concentrated attention on the human subject, our culture and our history.74 Increasingly in the humanities and the social sciences after World War II, the main emphasis centered on humanity's powers of historical action, cultural "construction" and societal development.75


72. LOVEJOY, supra note 8, at 242–87.


74. GALLAGHER, supra note 73, at 140–83; see also French, supra note 7, at 48–72.

VII. THE MODERNIST NARROWING OF JUSTICE AND THE NEED FOR A RECOVERY OF METAPHYSICS: THE VIEW OF JOHN RAWLS

If a major characteristic of Western modernist thought is its focus on both the human subject and our historical agency, then emerging ecological concerns are calling us to embrace a postmodern frame that understands human subjectivity and agency within a frame of reference that acknowledges an evolution sustained by the planet's natural order and energy flows. It should thus be no surprise that if the modernist notional separation of humanity from nature is a key philosophical and religious problem, then critical postmodern thinking distancing itself from those inadequate modernist assumptions finds important convergence with much of the nature-centered pre-modernist thinking employed to understand the general context of human life, agency and history.

John Rawls, in his magisterial A Theory of Justice, illustrated the ongoing intellectual force of modernist human-centered assumptions. He worked out a social contract model articulating the obligations of justice, but only on page 512 of his tome did he engage the questions of justice owed to animals and to nature.\(^76\) He stated that his theory would not suggest that we owe strict duties to creatures that lack a sense of justice, yet he felt we have moral obligations not to be cruel or to wipe out a whole species. This latter act he dubbed a "great evil."\(^77\) While he held we have "duties of compassion" and "humanity," he believed that these issues lay outside the theory of justice.\(^78\) He then concluded:

> A correct conception of our relations to animals and to nature would seem to depend upon a theory of the natural order and our place in it. One of the tasks of metaphysics is to work out a view of the world which is suited for this purpose . . . How far justice as fairness will have to be revised to fit into this larger theory it is impossible to say.\(^79\)

Rawls here clearly illustrated the range and impact of the metaphysical dualism sustained by the continuing influence of the Newtonian world-picture that so shaped Enlightenment discussions of justice and the "rights of man." This strong legacy of the Enlightenment held that the center of morality lay in contracts "made by rational consent between articulate, self-interested, contracting parties who are equals in power."\(^80\) Following this Enlightenment view of ethics, Rawls concentrated his contract theory of justice in the relationships between and among free human agents. Given the authority of his starting assumptions, it is not surprising that Rawls expended little attention on humanity's relationships to other species or our


\(^{77}\) Id.

\(^{78}\) Id.

\(^{79}\) Id.

\(^{80}\) Midgley, supra note 43, at 51.
sustaining ecosystems. Why? Because they—in this view—lay as deep “givens,” non-problematic and thus relatively ethically uninteresting until, that is, page 512 and then only for one paragraph. Admirably, he acknowledged the limits of his approach to thinking about justice by his recognition of the need for a “larger theory” or ethical framework. Sadly, he spent almost no energy in even sketching out how this expanded attention to “the natural order and our place in it” might require a correspondingly similar expansion of our sense of the obligations of justice.

Rawls, I would submit, pointed out directly the distinct limits of the modernist stress on the unique agency, value and dignity of the human, and the need to recover the more expansive frame for understanding humanity’s place within the broader order of nature. In his brief reflection on this issue, he highlighted how overcoming the limits of these modernist assumptions about the separation of the human from nature requires engaging some of the shared perspectives found in pre-modern traditions of Western metaphysics that frame the human within the larger “natural order.”

VIII. MODERN THEOLOGICAL HUMAN-CENTERED EMPHASES

Powerful currents of theological and philosophical interest have pulled dominant streams of modern Catholic and Protestant theology towards emphasizing the human person and humanity’s dynamic history and away from more traditional emphases on the doctrine of creation and the natural law. In the nineteenth and first half of the twentieth century, main currents of Protestant theology shared a general human-centered focus and an understanding that the nonhuman natural world is best understood as a sphere of objects in contrast to the human sphere of subjects. This stress on human subjectivity, agency and history is seen in a host of major Protestant theologians of that era—e.g., Ritschl, Raushenbusch, Barth and Bultmann. As Joseph Sittler, a prominent American Lutheran theologian, stated in his 1972 critique of this human-centered emphasis, the view of a “fundamentally dis-graced natural world” led theologians to constrict God’s operational sphere of activity and will to the sphere of history, not God’s providential sustaining action in the sphere of nature. As Gustaf Wingren

81. Id. at 49–51, 64.
82. Id.; see also N. Max Wildiers, The Theologian and His Universe: Theology and Cosmology From the Middle Ages to the Present (Paul Dunphy trans., 1982) (providing a helpful treatment of how the general metaphysical world-picture tends to shape thinking in every age).
83. See French, supra note 7, at 48–72.
85. Id. at 61–65.
stated a year later, much of contemporary Christian theology was engaged in a strong “flight from creation.”

Likewise, a similar movement arose in twentieth century Catholic circles, inspired by Karl Rahner, Bernard Lonergan, Bernard Häring and many others, of turning to “the subject” and history. Neither of these turns necessarily needed to be developed using the natural order as a conceptual foil for understanding human subjectivity, our “dignity” and the dynamism of historical action, but with great frequency the category of “nature” was, and in many quarters continues to be, so employed. Gustavo Gutierrez spoke for many Catholic thinkers across the 1940s, 50s, 60s, and 70s when he boldly announced that “[o]ther religions think in terms of cosmos and nature: Christianity rooted in Biblical sources thinks in terms of history.”

Indeed, the long pontificate of Pope John Paul II tended to enshrine a personalist-centered view stressing human subjectivity and history. This Pope’s views were strongly shaped by his doctoral dissertation’s emphasis in the phenomenological movement’s understanding of the human. This concentration is well captured in the title of one of his major books, The Acting Person. His clear embrace of the Newtonian world-picture was vividly displayed in his encyclical Laborem Exercens, where he described “human work” as an activity of subjects who dominate and transform the natural sphere of objects and thus “humanize” it and bring it “dignity” through this transformative process. He cited to Genesis 1:26-28 to reiterate the legitimacy of humanity’s dominion and even “domination” of the natural order through our work. Work, in his view, makes us “co-creators” with God as we exert our sovereignty in the natural order.

Similarly, we see this emphatic Catholic concentration on “the person” in one of the major recent efforts by Catholic philosophers Germain Grisez and John Finnis to articulate a “revised natural law theory.” Many scholars have noted that this project sustains a new basis for a universalist ethic.

89. See French, supra note 7, at 48–72.
94. Id. at 4–6.
95. Id. at 25.
However, this ethic is so grounded in the structure of practical reason that many scholars hold it owes more of a debt to Kantian insights and perspectives than to the breadth of Thomistic themes.\textsuperscript{97} In Grisez’s and Finnis’s approach, even natural law thinking is pulled into an accommodation with the Newtonian dualism that shapes Kant’s thought. In this fashion, it is pulled far away from the creation-centered frame found in a number of Aquinas’s treatises. As Lloyd Weinreb stated, Grisez’s and Finnis’s attempt to recover the natural law tradition resulted in the development of a “natural law without nature.”\textsuperscript{98} There is surely some irony when Catholic thinkers now try to appropriate the mantel of the “natural law” tradition even as they concentrate intense focus on human subjectivity, historical agency and freedom, and pay scant attention to how the human is conditioned and sustained by an enviroring natural order.

Across the last twenty years, mainstreams of both Catholic liberal and conservative thinking have tended to engage natural law thinking with an anthropocentric set of assumptions stressing the universal order of human reason—not the global order of creation.\textsuperscript{99} Sadly, this has pulled attention away from the Medieval natural law heritage, which holds a deep appreciation for the order of creation and thus enjoys significant resources for engaging current ecological concerns. This is a grave shortcoming for a religious community that holds the allegiance of roughly one billion people, or approximately one-sixth of humanity. The Catholic Church now bears a heavy burden of responsibility to help its people across the globe realize the significance of the ecological threats we, and our children’s generation, face.

IX. ECOLOGICAL LAWS AND THE RECOVERY OF NATURAL LAW: NATURAL LAW IN STOIC AND CATHOLIC REFLECTION

The ecological grounding for an emerging global ethic closely parallels a number of the perspectives and themes dominant in the natural law tradition of Western ethics—a tradition that in the last few centuries has been most closely associated with the Roman Catholic Church. This natural law tradition was grounded in ancient Greek and Roman Stoic notions that

\textsuperscript{97} See Russell Hittinger, A Critique of the New Natural Law Theory 8–9, 28–30, 192–95 (1987).

\textsuperscript{98} Lloyd L. Weinreb, Natural Law and Justice 97–126 (1987); see also Hittinger, supra note 97, at 192–95.

the universe itself should be viewed as a great city, a "cosmopolis," in which all peoples are citizens of a common whole. ¹⁰⁰

While the origins of Greek political philosophy concentrated attention on the human within the frame of a particular city-state, the polis, Alexander the Great's conquests gave rise to a vast multicultural empire that required a broader philosophical frame for understanding human community. ¹⁰¹ These concerns of the Hellenistic age gave impetus to the Stoic philosophers' vision of the universal community of humanity, which was based on our common rationality and participation in the life of the universe—a great polis writ large. ¹⁰² Stoic thought emphasized the breadth of humanity's participation in the broader community, but it distinctly affirmed humanity's privileged status above animals, plants and the rest of nature because of our unique rationality. ¹⁰³

Not surprisingly, many Roman thinkers were drawn to Stoic views when reflecting on their own multicultural empire. As Marcus Aurelius, a Roman emperor and philosopher, noted in The Meditations, "[a]ll things are interwoven with one another, and the bond which unites them is sacred; practically nothing is alien to anything else, for all things are combined with one another and contribute to the order of the same universe." ¹⁰⁴ Stoic ethics flows directly from this affirmation that each individual is a part of that great Whole. Our task is to promote the common good. ¹⁰⁵

Stoic thinking, along with the neo-Platonic cosmology of the "Great Chain of Being," shaped dominant streams of Medieval Christian theology. ¹⁰⁶ In an influential synthesis, Thomas Aquinas gave expression to this cosmology in his "On Creation" and "The Divine Government" in his Summa Theologica. ¹⁰⁷ He believed that the doctrines of creation and of God's ongoing governance of the created order marked a moral order, the lineaments of which we humans can discern via reason. ¹⁰⁸ An affirmation of the unity of the human species grounded Aquinas's articulation of a uni-


¹⁰³. Id.; see also AURELIUS, supra note 100, at 69.

¹⁰⁴. AURELIUS, supra note 100, at 79; see Stephen Toulmin, Nature and Nature's God, 13 J. RELIGIOUS ETHICS 37, 37–52 (1985) (discussing how some ecologically-informed thinkers are developing perspectives similar to the overall Stoic vision).

¹⁰⁵. AURELIUS, supra note 100, at 77–78, 91, 98, bks.8:23, 9.22, 10.6.

¹⁰⁶. See RALPH McINERNY, ST. THOMAS AQUINAS 75–87, 105–126 (1977); SANTMIRE, supra note 11, at 75–119.

¹⁰⁷. See AQUINAS, supra note 8, at 103–119, q.44–64.

¹⁰⁸. Id. at 1009, q.94, a.2.
Human reason is able to discern the basic natural inclinations and ends of the natural order, thus human reason is able to bridge across cultural differences in a meaningful way due to our common human inclinations and capacities for right reason. Certain basic themes of the natural law heritage, such as the priority of the "common good" over that of the individual, remain quite pertinent for informing a viable global ethic for our own age.

While Aquinas developed a reason-centered approach to the natural law, his dominant frame for understanding human life and experience was, I believe, creation- and God-centered. Whereas modern philosophies and theologies focus more on the distinctive sphere of human culture and history, pre-modern philosophy and Christian theology, like Aquinas's, framed their understanding of human life within an account of the general ordering of the created world.

In Catholic circles, the allegiance to the natural law approach has waned in the last fifty years as Catholic personalist-oriented theology, Liberation Theology, and the transcendental Thomists—Karl Rahner and Bernard Lonergan—have influenced many to believe that the natural law claims are too rigid and need to be discarded in favor of more dynamic understandings of the individual's relationship with God. Bernard Härting gave influential expression to this when he noted that God's call and our response are more central in the moral life than any attention to fixed natural law findings grounded in appeal to static notions of reason and reality.

Richard Gula helpfully noted the existence of two historic strains of interpretation of the natural law tradition, which he calls the "order of reason" and the "order of nature" approaches. Both Stoic and Medieval expressions of the natural law highlighted humanity's participation in the

109. Id. at 993–996, q.90–91.
112. See Nasr, supra note 3; Wildiers, supra note 82; Cosmoogy and Ethical Order, supra note 71, at 1–8.
community of creation and also our participation in a universal human community whose members are capable of right reason and thus able to affirm common moral truths. Most Catholics who sustain an interest in the natural law today follow the "order of reason" view, which states that the natural law is primarily about the common structures of human reason by which all persons—regardless of culture or nation—are able to affirm and be guided. However, the commonality of the power and structures of reason seem to pull much Catholic discussion towards an ethics closer to a Kantian vision of a universal human community than a Thomistic one, wherein the stress on humanity's common reason was also balanced by an overarching emphasis on humanity's participation within the community of creation.

A growing number of ecologically-oriented thinkers are finding intriguing the creation-centered frame of pre-modern, natural law thinking for its strong family resemblance to today's ecological sciences. Environmentalists today, like Stoic and Medieval thinkers before, wish to turn attention to the priority of the global common good—a good or whole more expansive than just the good or whole of humanity—even as we ponder the general wisdom of conforming human life and action in some way (and with important qualifications) to the general order of nature.

X. CREATION-CENTERED THEOLOGY ACROSS THE CENTURIES: THOMAS AQUINAS AND THOMAS BERRY

This new and remarkably moving and tragic story of humanity's increasing degradation of the Earth offers us a great gift by jolting our eyes open. I believe that Thomas Berry, a Catholic priest, and other religious thinkers have it right in believing that the ecological sciences are giving today's generations a remarkable gift of a grand new narrative of beginnings. Though scientists appropriately articulate this story with no resort to God-talk, there is nothing inappropriate about religious believers—Christian, Buddhist, Muslim, Jewish, Hindu or Indigenous—seeing this evolutionary, ecological account as a resource for reflecting on God's (or the Gods') ways of creating and sustaining the world, its plant, animal and human communities, and on humanity's loyalties and moral responsibilities of planetary care. In this way, the traditional Christian affirmations of the

116. See Aurelius, supra note 100, at bk.3.11, 5.8, 7.9, 7.55; see also Gula, supra note 99, at 220–30.
doctrines of creation and providence can be re-appropriated and invigorated in an ecological way. Indeed, Berry and others rightly suggest that both Christian believers and believers in other religious traditions may not dismiss the world of scientific studies as distant from theology, religious stance or "faith."\textsuperscript{121}

Berry appeals back to the great Christian theological tradition spoken of by Augustine and others throughout the centuries as the "Two Books of Revelation."\textsuperscript{122} This tradition holds that God as Creator and Sustainer is revealed not only in Scripture, but also in the natural order of God's creation.\textsuperscript{123} This physical realm is also honored as a sacred book, disclosing something of God's intentions for the world and God's ways of sustaining it.\textsuperscript{124} From this perspective, it would seem that from the stance of faith, there can be no truly secular disciplines.\textsuperscript{125} For theists, all disciplines exhibit something about how God creates and sustains both human and non-human life-forms in the world we know.\textsuperscript{126}

Berry is right, I believe, when he stated that the faith communities are being offered a great gift of a "new creation story"—like Genesis, only better—in that the new story is empirically grounded, transculturally developed, and truly universal in its histories of the world's peoples.\textsuperscript{127} This ecologically-informed world picture provides the roughly two billion Christians living today with an important, new hermeneutical lens for reading the Hebrew Bible, New Testament, and other theological classics of the Churches from throughout the centuries. Muslims, too, are equally being given a new lens through which to read the Koran, and Jews, of course, now can enjoy an invigorated creation-centered and scientifically-informed reading of the Hebrew Bible. Hindus, Buddhists, Jains, and indigenous peoples are all given a new way of reading and appropriating the materials of their traditions with eyes opened to new concerns, new senses of the embodied expanse of the sacred, and new appreciation for the radical giftedness of being alive on Earth.

XI. NATURAL LAW WITH A BROADER REACH THAN SEX

As James Nash, a Protestant ethicist, rightly argued, the historic natural law emphasis on "following nature" coheres closely to the emphasis

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\item[121.] \textit{Id.;} \textsc{Thomas Berry}, \textsc{The Great Work: Our Way into the Future} (1999); \textit{see also} \textsc{Gustafson}, \textit{supra} note 14, at 25, 53–62.
\item[122.] \textsc{Berry}, \textit{supra} note 121, at 13–14; \textit{see} \textsc{Augustine}, \textit{supra} note 13, at 117, 162–163, 172–176; \textsc{Christopher Kaiser}, \textsc{Creation and the History of Science} 61–62, 138, 282 (1991); \textsc{A.R. Peacocke}, \textsc{Creation and the World of Science} 1–49 (1979).
\item[123.] \textit{See} \textsc{Gustafson}, \textit{supra} note 14, at 92–113.
\item[124.] \textit{See} \textsc{James M. Gustafson}, \textsc{A Sense of the Divine: The Natural Environment from A Theocentric Perspective} 42 (1994).
\item[125.] \textsc{Gustafson}, \textit{supra} note 14, at 92–113.
\item[126.] \textit{Id.;} \textit{see also} \textsc{Gustafson}, \textit{supra} note 124, at 21–53.
\item[127.] \textsc{Berry}, \textit{supra} note 120, at 123–37.
\end{enumerate}
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given by ecologists and environmentalists on the folly of those who ignore the norm of "ecosystemic fitness or compatibility." 128

The controversies around the Vatican’s moral appeal to the natural law tradition to condemn both artificial birth control and gay sexual relations as intrinsically evil by virtue of being “unnatural,” have led many moderate and liberal Catholics to pull back from the natural law mode of moral argumentation. 129 Many liberal Catholic ethicists have critiqued the Vatican’s ongoing condemnation of birth control as “physicalist,” namely trying to derive directly moral values from biological facts. 130

Thus, we have an ironic situation. Catholic liberals, who are interested in ecological concerns, tend not to be interested anymore in listening to natural law appeals. 131 Conservative Catholics, who generally do affirm the natural law heritage, tend not—as yet—to be interested in ecological concerns. The potential for applying natural law perspectives to guide reflection of environmental policy and law has not yet been widely actualized.

My own view is that the liberal critique of Vatican thinking as physicalist is misplaced. The problem, I believe, is not that recent Popes have been too physicalist in their reasoning, but rather quite the opposite. I would submit that they have been insufficiently physicalist. If you want to see physicalism, read Medieval theologians on the doctrines of the Incarnation and Creation. Read in Thomas about how God sustains each existent entity and living being in each moment. Read in Francis’s Canticles and other writings how he names a wolf and the sun “Brothers” and the moon, water, and “Mother Earth” as “Sisters.” 132

It would seem that we need to distinguish different streams of physicalist thinking and debate about which are more or less adequate. If ecology has taught us anything, it is that there is nothing wrong with physicalism. We humans may enjoy rationality, but we should not forget our “animality”—our primate-ness. We humans may be agents in history, but we should not forget our dependency on ecosystems, climate patterns, and water and oxygen cycles. The modern Catholic Church has too long stressed history, not nature. It has too obsessively concentrated on conforming our actions to the “order of nature,” narrowly focused on the dynamics of sexual reproduction. However, Thomas Aquinas’s emphasis on God’s will being discerned across the breadth of nature suggests that it is

129. See Gustafson, supra note 124, at 42.
131. CATHOLIC MORAL TRADITION, supra note 130, at 73–86.
quite appropriate to open up questions about the "natural laws" of ecosystems' well-being and sustainability, laws about species vitality and climate change, and laws about ecological degradation. 133

Conservative Catholics, I believe, tend to miss an important point that planetary care is not distant from core conservative Catholic views. Acting for conservation should be understood pretty readily as a good conservative practice. Liberal Catholics tend to feel Rome asserts too many natural laws. However, I and other ecologically-oriented thinkers look forward to the day when Rome will begin to recognize the moral and theological significance of the broad array of "natural" or ecological laws that govern the flourishing of humans and ecosystems—laws that impinge on our everyday life practices in a whole range of spheres of human action and practice. Rome would do well to listen more closely to voices in Manila, Guatemala City, Rio, Cairo, New Orleans, Benaras and others who know firsthand how human well-being is inextricably tied to ecological sustainability. 134 Sexual and medical concerns are surely important spheres deserving close theological and moral reflection, but so are the spheres of transportation, energy production and consumption, urban planning, zoos, farming and food chains, habitat destruction, climate change, species loss, coral reef bleaching, deforestation, snow cap melting, soil run-off, aquifer depletion and over-fishing. What about reflection on the value of future generations, both human and nonhuman? What about a sustained attention to imminent and massively tangible environmental trends, the impacts of which are beginning to be felt by human and nonhuman communities across the globe?

The Catholic heritage has deep resources for reflecting on "natural law," the order of creation, and the global common good. These need to be mobilized more robustly. Rising ecological concerns suggest that the Church now needs to embrace its responsibilities to promote practices of ecological responsibility and planetary care, and to call upon the world's other great religious communities to join forces in this great work. 135

134. There are a number of important National Bishops' Conference Pastoral Letters that are initiating the Church's response to emerging ecological concerns. See "AND GOD SAW THAT IT WAS GOOD": CATHOLIC THEOLOGY AND THE ENVIRONMENT 223–243, 275–293, 309–318 (Drew Christiansen, S.J. & Walter Grazer eds., 1996) (providing the letters of the American, the Guatemalan, and the Filipino Bishops).
135. See Thomas Berry, Christianity's Role in the Earth Project, in CHRISTIANITY AND ECOLOGY: SEEKING THE WELL-BEING OF EARTH AND HUMANS, supra note 5, at 127–34; BERRY, supra note 121.