Abstract. Pope Francis’s encyclical on ecology addresses the deep and abiding problems of atomism, exploitation, and prodigality that distort the God–human-nature relationship. The invitation to think and act in more integrated and integrating ways—already put forward in Evangelii gaudium—thwarts our becoming “nomads without roots” and binds ostensibly disparate voices in a solidarity that is truly global in its reach. The resolve for such a change in worldview and agency is reminiscent of Van Rensselaer Potter’s original conceptualization of bioethics as a field of study and application that would bridge the disciplines. National Catholic Bioethics Quarterly 15.4 (Winter 2015): 665–671.

The debate about whether or not we have entered a new age—distinct from the period that geologists call the Holocene—has begun. What seems clear, though, is that humans have a hand in shaping global environmental change; there is serious concern about how our dependence on fossil fuels and industrialized agriculture may tip the scales and wrench us out of the relative stability that we have known these last dozen millennia or so.¹ Some are arguing that there is a pressing need to recognize that we have come

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into a rather precarious—if not volatile—mode of being in which the effect of human
dominion on the natural world is not only undeniable but is at the helm of setting its
course. A working group within the International Union of Geological Sciences is
currently mulling over the evidence to address the possibility of officially heralding
the advent of “the Anthropocene.” Others contend—contingent on what we accept
as evidence for this classification—that we may very well already be a few centuries
into the epoch.

Regardless of the nomenclature, the conversation itself is telling. Humans (their
centrality signaled by the anthropos in “anthropocene”) are driving environmental
change in an unprecedented way. As disconcerting as our mechanization of nature
has been (what some religious scholars have called the “disenchantment of nature”),
what is truly alarming is the aloofness, atomism, and detached objectivity—as it
were—that imagines humankind to be completely separate from the natural world.

Agere sequitur esse:
From the Earth, For the Earth

St. Thomas Aquinas makes plain that the Catholic moral tradition hinges on a
fundamental principle: agere sequitur esse (that is, “action follows being”). Better,
what we do and how we act follow from what or whom we believe ourselves to be.

In Judaism and Christianity, all impetus for the mandate to make right one’s
relationship with the world of which we are part is spelled out in some of the first
lines of Scripture: “The Lord God took the man and placed him in the garden of
Eden, to till it and tend it” (Gen. 2:7). The connection between humankind (hā’ādām)
and the earth (hā’ădāmā) is made explicit in the text, both etymologically and sub-
stantially; Old Testament professor Richard Clifford, in his remarks on Genesis in
The New Jerome Biblical Commentary, refers to scholars who suggest that “earth
creature” rather than “man” is the more suitable rendering of the term in the second
account of Creation. All language of “dominion” and “subduing” is to be read in
this context and seen through the lens of the theological anthropology that describes
human beings as made in the image and likeness of a God who declares the whole
of Creation to be very good (Gen. 1:31).

2 Rockström et al., “Safe Operating Space”; and Joseph Stromberg, “What Is the
5 See Thomas Aquinas, Summa contra gentiles 3.69.20; and Aquinas, Summa theo-
logiae III.34.2.1.
7 See also Francis, Laudato si’ (May 24, 2015), nn. 65–67.
The dispute over the degree to which humans play a role in global environmental changes (with climate as a case in point) is not all that important for Jews and Christians in terms of determining whether or not one should act. The message of the sacred texts is quite clear: human beings are, at the very least, tenants of an earth that (we are reminded over and again) ultimately belongs to God (Ps. 24:1 and Lev. 25:23). At best, humans are stewards—finite “participants in natural processes that we did not create and that do not necessarily conform to human moral preferences and expectations.” Rather than controllers, humans are, by our own nature, dependent on the Deity, on others, and on the created world. Take note of the number of times—in Genesis alone—God rolls his eyes (so to speak) at the human penchant for insisting on independence, self-determination, and self-sufficiency; Adam and Eve are punished for it and so is the ambitious community bent on making a name for itself in the story of the Tower of Babel.

Western culture’s emphasis on individualism and hyper-functionalism reduces interdependence to a mark of weakness, even though it is both a theological and scientific fact. It is this interdependence that automatically binds Jews and Christians (and most people of faith for that matter) to the cause, not as a supererogatory act of goodwill and not even as a commitment to responding to the global eco-crisis as an issue of social justice. The mandate is part and parcel of human construction, and it is grounded in our ontology and teleology. Being formed from the earth for the earth inevitably makes the global environmental crisis a global human health crisis.

Of course, it is not simply because human health is implicated that humankind is called to tend to the environment; the latter does not only become a concern when the fate of humanity is at stake. Despite the historian Lynn White Jr.’s famous accusation that “Christianity is the most anthropocentric religion the world has seen,” the earth is deemed good by God even before the arrival of humans, suggesting an inherent value to nature—which, according to Daniel’s liturgical hymn, is endowed with a certain agency that manifests in the worship of God (Gen. 1:1–25 and Dan. 3:57–81). “The Bible,” Pope Francis states, “has no place for a tyrannical anthropocentrism unconcerned for other creatures.” Although it is important to make clear that the Church opposes eco-egalitarianism and espouses neither an eco-centric nor even a biocentric worldview that might level the special dignity ascribed to human persons, care of creation is considered a virtue in its own right.

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8 Lisa H. Sideris, Environmental Ethics, Ecological Theology, and Natural Selection (New York: Columbia University Press, 2003), 8, 266.
10 See also Francis, Laudato si’, nn. 69, 239.
11 Ibid., n. 68.
In his delivery of the Trócaire 2015 Lenten Lecture at the Pontifical University of St. Patrick’s College in Maynooth, Ireland, Peter Cardinal Turkson—the current president of the Pontifical Council for Justice and Peace—echoed a familiar adage common to the last three papacies: “For the Christian, to care for God’s ongoing work of creation is a duty, irrespective of the causes of climate change” or whatever other dimension of the eco-crisis; protecting the whole of creation is “a sine qua non of being Christian.”  

Before the publication of the Pope’s encyclical, Turkson spoke to Francis’s constant promotion of “integral ecology as the key to addressing the inter-related issues of human ecology, development and the natural environment.” To be sure, this is a major theme of Laudato si’.  

The deliberative use of integral as an adjective here is indicative, and it best encapsulates what is underlined in the text: creation is an intricate system that must be tended to comprehensively by stewards who recognize the covenantal and all-embracing character of the vocation of caregiving. “The book of nature,” Pope Benedict XVI reminds us, “is one and indivisible”; if humankind continues to indulge in a “culture of waste,” wherein all things are disposable and replaceable, the indiscriminate appropriation of the earth’s resources by a select few can—and will—lead to utter devastation.

An Integral Ethic of Solidarity: Ecology Meets Bioethics

Francis decries “compulsive consumerism,” “tyrannical anthropocentrism [that is] unconcerned for other creatures,” and the previously mentioned “throwaway culture” that delights in excess and is quick to objectify and discard. This aversion yields valuable insights for the field of bioethics. In fact, the pontiff has, on numerous occasions, framed a number of important bioethical issues—such as abortion, euthanasia, the mistreatment of the elderly, buying the organs of the poor to resell or for use in experimentation, indiscriminate genetic manipulation, and absolute mastery over the human body (which translates to absolute mastery over creation)—as evidence of this “culture of waste.” In the encyclical, Francis deems it inconsistent to
oppose the trafficking of endangered species while being undisturbed about human trafficking and disregarding “unwanted” human beings.\textsuperscript{21}

When we fail to acknowledge as part of reality the worth of a poor person, a human embryo, a person with disabilities—to offer just a few examples [Francis states], “it becomes difficult to hear the cry of nature itself; everything is connected. Once the human being declares independence from reality and behaves with absolute dominion, the very foundations of our life begin to crumble, for “instead of carrying out his role as a cooperator with God in the work of creation, man sets himself up in place of God and thus ends up provoking a rebellion on the part of nature.”\textsuperscript{22}

Economics, health, development, environment, ethics, and religion are important discussion partners at the same table. Francis, Turkson affirms, is drawing our attention in these days to “the ominous signs in nature that suggest that humanity may now have tilled too much and kept too little, that our relationship with the Creator, with our neighbour, especially the poor, and with the environment has become fundamentally ‘un-kept,’ and that we are now at serious risk of a concomitant human, environmental and relational degradation.”\textsuperscript{23} There is no separating global inequality and injustice from environmental degradation; it is all interrelated.\textsuperscript{24}

The call for a more integrated and integrating understanding of ecology is one that parallels Van Rensselaer Potter’s vision for bioethics at the very beginning of its formalization as a discipline. Speaking of what he would go on to identify as the “science of survival,” Potter was adamant that bioethics “must be built on the science of biology and enlarged beyond the traditional boundaries to include the most essential elements of the social sciences and the humanities.”\textsuperscript{25} The peculiarity of bioethics was that it would (or should) be the place where biology—understood broadly by Potter as “the foundation on which we build ecology, which is the relation among plants, animals, man, and the physical environment”—and human values entered constructive conversation.\textsuperscript{26}

Somewhere along the way, though, bioethicists left ecological concerns by the wayside as they turned their attention primarily to issues in human health and medicine, leaving the co-emerging field of environmental ethics to deal with the problems of the natural world on its own. But this severance of interests parcels responsibility in a way that does not capture the realities of interrelatedness, interconnectedness, and interdependency.

\begin{footnotes}
\footnotetext[21]{Francis, \textit{Laudato si’}, nn. 123, 131, and 155.}
\footnotetext[22]{Ibid., n. 91.}
\footnotetext[23]{Turkson, “Integral Ecology,” 8, original emphasis.}
\footnotetext[24]{Ibid., 5.}
\footnotetext[26]{Ibid., 2–3, original emphasis.}
\end{footnotes}
The manifestation of poor environmental health in vulnerable communities that are disproportionately exposed to toxic air quality confirms Francis’s view in *Laudato si’*, where he embeds issues of health in their environmental context and reminds us repeatedly about the often-neglected effects on “the disposable of society.” In its 2007 report on the state of lung disease in diverse communities, under the telling section title “Environmental Injustice,” the American Lung Association found that “communities of color in the United States have higher prevalence and death rates of the most common respiratory illnesses than do predominantly White communities,” which are in large part attributed to substandard indoor and outdoor air quality as well as residential proximity to freeways and other areas plagued by hazardous emissions (68 percent of African Americans live within thirty miles of coal-fired power plants, compared with 56 percent of Whites). While African Americans make up 12.1 percent of the US population, they account for 25 percent of all asthma-related deaths.

If the health of humans and the health of nature go hand in hand, bioethics needs to be attentive to both. Francis’s call for *integral* ecology reminds us, as ecotheologian Sallie McFague has brought to the fore in her work, that Creation is not merely the “backdrop of salvation,” but is “the place where it all happens and to whom it happens.” The Creation accounts, the Incarnation, the sacraments, the healing narratives of Jesus, and the eschatological vision of the new heaven and the new earth underlie belief in a God who values all bodies in the natural world. In particular, “the Christic paradigm,” McFague recalls, “reaches out to include especially the vulnerable, outcast, needy bodies.” And it is on account of our bodies, Francis writes, that humans are so closely bound to the natural world; so much so, “that we can feel the desertification of the soil almost as a physical ailment, and the extinction of a species as a painful disfigurement.”

Like McFague, Francis sees nature as the new poor: “the earth herself, burdened and laid waste,” he says, “is among the most abandoned and maltreated of our poor.” Turning our attention toward the desperate state of the natural world does not (and must not) amount in any way to a desertion of the human poor, but to an important understanding that “every violation of solidarity and civic friendship harms the environment, just as environmental deterioration in turn upsets relations in

27 Francis, *Laudato si’*, nn. 20, 25, 29, 45, 48, and 49.
29 Ibid., 13.
30 Ibid., 21.
32 Ibid., 288–291.
33 Ibid., 291.
34 Francis, *Evangelii gaudium* (November 24, 2013), n. 215; and Francis, *Laudato si’*, n. 89.
society. Nature, especially in our time, is so integrated into the dynamics of society and culture that by now it hardly constitutes an independent variable.” Describing our relationship with nature apart from our relationship with others, Francis cautions, “would be nothing more than romantic individualism dressed up in ecological garb, locking us into a stifling immanence.” Neglecting these relationships imperils life itself.

The human and natural environments deteriorate together and flourish together. Pope St. John Paul II noted that when it comes to interdependence, “the correlative response as a moral and social attitude, as a ‘virtue,’ is solidarity. This then is not a feeling of vague compassion or shallow distress at the misfortunes of so many people, both near and far. On the contrary, it is a firm and persevering determination to commit oneself to the common good; that is to say to the good of all and of each individual, because we are all really responsible for all.” Francis’s recent encyclical reminds us that this responsibility for all is truly for all, non-human nature included. In fact, the pontiff contends, “the human person grows more, matures more and is sanctified more to the extent that he or she enters into relationships, going out from themselves to live in communion with God, with others and with all creatures. In this way, they make their own that Trinitarian dynamism which God imprinted in them when they were created. Everything is interconnected, and this invites us to develop a spirituality of that global solidarity which flows from the mystery of the Trinity.” The Church’s preferential option for the poor and its emphasis on dignity, solidarity, stewardship, and communion compel Catholic bioethics in its own right to envision humans and the environment in a dynamic covenantal partnership in which the health of one is deeply affected by the other.

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36 Benedict XVI, Caritas in veritate (June 29, 2009), n. 51.
37 Francis, Laudato si’, n. 119.
38 Ibid., n. 70.
39 Ibid., n. 48.
40 John Paul II, Sollicitudo rei socialis (December 30, 1987), n. 38.
41 Francis, Laudato si’, n. 240.