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5. The Earth Charter facing the Anthropocene Epoch

Holmes Rolston III

1. INTRODUCTION

J. Ronald Engel is right: we are at a "hinge" point in the history of Earth.[1] He hopes for a "new axial age."[2] We are living in a time of "great peril and great promise," "as never before in history" (Earth Charter, preamble and closing). We have entered the first century in 45 million centuries of life on Earth in which one species can jeopardize the planet's future. That is cause for alarm. But unfortunately, the new age we are currently hearing the most about is the Anthropocene Epoch: the era of the imperial human domain. Humans will manage the planet as never before, re-engineering it in their own interests. This is more cause for alarm. On such a contemporary scene, we ought to welcome a new vision, an Earth Charter. Yet the complexities we face – both the goods and the evils – require that we re-examine the Charter's possibilities, wondering about its limits. Engel has been undertaking that, and I here continue that dialogue.

An overall concern is that the Earth Charter is likely to remain aspirational, not operational. Aspirational documents may be cheerfully endorsed as high ideals that we can someday hope for, but with the reservation that these ideals are nowhere in sight on the contemporary horizon. The United Nations adopted in 1982 the World Charter for Nature, affirming that "every form of life is

[1] J. Ronald Engel, "Property: Faustian Pact or New Covenant with the Earth" in David Grinlinton and Prue Taylor (eds.), *Property Rights and Sustainability: The Evolution of Property Rights to Meet Ecological Challenges* (Martinus Nijhoff Publishers, 2011) 64.

[2] J. Ronald Engel, "Summons to a New Axial Age: The Promise, Limits, and Future of the Earth Charter" in Laura Westra and Mirian Vilela (eds.), *The Earth Charter, Ecological Integrity and Social Movements* (Routledge, 2014) xv–xxx.

unique, warranting respect regardless of its worth to man."[3] But no nation has taken this document seriously in practice. Similarly, the Earth Charter seems unlikely ever to be treated as an "unconditional covenant commitment. . . to be a real and operative agency in our lives, something to which we give ourselves wholeheartedly."[4]

Compare this, however, with the Universal Declaration of Human Rights adopted by the United Nations in 1948, in the wake of the Second World War. That too was aspirational, yet over the decades it has increasingly been taken more seriously as operational in treaties, economic transfers, national constitutions. Hundreds of millions support these human rights wholeheartedly. Has the Earth Charter had or can it similarly have increasingly forceful influence? Engel argues that it can, as seen in his 2017 address, "Can the Earth Charter Be Renewed?" given at the Global Ecological Integrity Group Conference in Windsor, Ontario.

2. EARTH CHARTER AND/OR EARTH ENGINEERING

The way forward, according to contemporary Anthropocene enthusiasts, is quite opposite from what the Earth Charter intends. We ought to embrace an ever-increasing human domination of the landscape, perpetual enlargement of the bounds of the human empire. The Anthropocene is "humanity's defining moment."[5] We are "the God species" (Lynas, 2011). *The Economist* published a cover story, "Welcome to the Anthropocene," which stated: "The challenge of the Anthropocene is to use human ingenuity to set things up so that the planet can accomplish its 21st century task."[6] Celebrating what he calls the "Planet of No Return: Human Resilience on an Artificial Earth," Erle Ellis concludes: "Most of all, we must not see the Anthropocene as a crisis, but as the beginning of a new geological epoch ripe with human-directed opportunity."[7]

The Earth Charter acknowledges that humans can and ought to manage the landscapes they inhabit. But the novel claims, entering the Anthropocene, are that we must think more globally, managing the planet as a whole. "What

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[3] United Nations General Assembly, 1982, *World Charter for Nature*. Online at www.un.org/documents/ga/res/37/a37r007.htm.

[4] Engel, above n. 1, 65.

[5] George A. Seielstad, *Dawn of the Anthropocene: Humanity's Defining Moment* (American Geosciences Institute, 2012).

[6] *The Economist,* "Welcome to the Anthropocene" May 28, 2011, Vol. 399, Issue 8735, 11.

[7] Erle Ellis, "The Planet of No Return" (2011) *Breakthrough Journal*, 2 (Fall) http://breakthroughjournal.org/content/authors/erle-ellis/the-planet-of-no-return.shtml.

we call 'saving the Earth' will, in practice, require creating and re-creating it again and again for as long as humans inhabit it."[8] "Whether we accept it or not, human beings now shoulder the responsibility of planetary management."[9] Richard Alley provides us with *Earth: The Operator's Manual*.[10] Humans can handle the planet.

Geoengineering is "the intentional large-scale manipulation of the environment."[11] The editors of a *Scientific American* special issue, "Managing Planet Earth,' asked: 'What kind of planet do we want? What kind of planet can we get?"[12] Find ways to redistribute rainfall, stop hurricanes and tsunamis, prevent earthquakes, redirect ocean currents, fertilize marine fisheries, manage sea levels, alter landscapes for better food production and generally make nature more user friendly.

Even those who hold that humans probably will not reconstruct the big-scale global systems point out that humans are bringing about novel ecosystems composed of new combinations of species under new abiotic conditions. Old styles of management, which focused on maintaining and restoring ecosystem integrity to a prior condition, as reflected in the Earth Charter, are now misplaced, no longer sufficient or even possible. We need to start thinking how "to adaptively manage the basic ecological conditions of the global biosphere."[13] We need to experiment with novel outcomes or trajectories, more to human benefit, rather than simply taking preventative or therapeutic measures.[14]

We are not going back to once-upon-a-time nature, but beyond nature. Environmental policy and ethics are mostly about intelligently domesticating landscapes. More than 80 percent of all people live in densely populated rural,

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[8] Michael Shellenberger and Ted Nordhaus, "Evolve: A Case for Modernization as the Road to Salvation" (2011) 30(1) *Orion,* 60-65: 61.

[9] Allen Thompson, "Responsibility for the End of Nature, or: How I Learned to Stop Worrying & Love Global Warming" (2009) 14(1) *Ethics & the Environment*, 14(1), 79–99: 97.

[10] Richard Alley, *Earth: The Operator's Manual* (W. W. Norton, 2011).

[11] David Keith, "Geoengineering the Climate: History and Prospect" (2010) 25 *Annual Review of Energy and the Environment* 245284.245).

[12] William C Clark, "Managing Planet Earth" (1989) 261(3) *Scientific American* 46–54.

[13] Allen Thompson and Jeremy Bendik-Keymer (eds.), *Ethical Adaptation to Climate Change: Human Virtues of the Future* (The MIT Press, 2012) 15.

[14] Timothy R. Seastedt, Richard J. Hobbs, and Katharine N. Suding, "Management of Novel Ecosystems: Are Novel Approaches Required?" (2008) 6 *Frontiers in Ecology and the Environment* 6547–553.

village and urban landscapes.[15] Natural systems are inextricably entwined with cultural systems.[16] Plan for a socially reconstructed, anthropogenic nature.

There is nothing in this anthropocentric vision comparable to the Charter's "challenge ahead. . . to care for Earth."[17] "Care for the community of life with understanding, compassion, and love."[18] The Earth Charter vision advocates harmony, not anthropic control. We ought to build our cultures aligned with the way the world is already built, rather than seek to rebuild this planet for ourselves. "Hands" (the root of "manage") are also for holding in loving care. What kind of planet ought we humans wish to have? One we resourcefully manage for our own benefit? Or one we hold in loving care? The Earth Charter hope is promising and wise. Also, alas, it is so lofty it seems increasingly unable to speak to these planetary managers, blinded by their arrogance. Nothing in the Anthropocene discourse suggests the Earth Covenant to which Engel aspires.

3. EARTH CHARTER AND SUSTAINABILITY

But hold on. The Charter urges: "We must join together to bring forth a sustainable global society."[19] "Adopt at all levels sustainable development plans and regulations."[20] The four-page Charter advocates sustainable communities 20 times. Why is that not promising, achievable, even necessary? It is. That is the short answer. But the longer answer is that "sustainable development" has proved an umbrella term that covers too much and specifies too little. No one wants unsustainable development. Sustainable development has for the quarter-century since Rio remained the favored model. The duty seems undeniable, plain and urgent. Over 150 nations have endorsed sustainable development. The World Business Council on Sustainable Development includes 130 of the world's largest corporations.

Proponents argue that sustainable development is useful just because it provides a wide-angle lens. The specifics of development are unspecified, giving peoples and nations the freedom and responsibility of self-development. This is an orienting concept that is at once directed and encompassing,

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[15] Erle Ellis and Navin Ramankutty, "Putting People in the Map: Anthropogenic Biomes of the World" (2008) 6(8) *Frontiers in Ecology and the Environment* 439–447.

[16] J Liu, T Dietz and SR Carpenter, "Complexity of Human and Natural Systems" (2007) 317 *Science* 1513–1516.

[17] The Earth Charter (2001), http://earthcharter.org/virtual-library2/the-earth-charter-text/ Preamble.

[18] Ibid, Principle 2.

[19] Ibid, Preamble.

[20] Ibid, Principle II, 5a.

a coalition-level policy that sets aspirations and thresholds, and allows pluralist strategies for their accomplishment. This is the general "inclusive" tone of the Earth Charter. "Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations."[21] "Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision."[22]

Critics reply that sustainable development is just as likely to prove an umbrella concept that requires little but superficial agreement, bringing an illusion of consensus, while glossing over deeper problems with a rhetorically engaging word. Seen at more depth, there are two poles, complements yet opposites. Economy can be prioritized, the usual case, and anything can be done to the environment, so long as the continuing development of the economy is not jeopardized thereby. The environment is kept in orbit with economics at the center.

Develop! Develop! Develop! One ought to develop, since that increases social welfare and abundant human life, and the environment will constrain that development if and only if a degrading environment might undermine ongoing development. The underlying conviction is that the trajectory of the industrial, technological, commercial world is generally right – only the developers in their enthusiasm have hitherto failed to recognize environmental constraints.

If economics is the driver, we will seek maximum harvests, using pesticides and herbicides on land, a bio-industrial model, pushing for bigger and more efficient agriculture, so long as this is sustainable for us. This will push to the limits the environmental constraints of dangerous toxic levels on land and in water, surface and ground water, favoring monocultures, typically of annuals, inviting soil erosion and invasive species. The model is extractive, commodification of the land. Land and resources are "natural capital."

At the other pole, the environment is prioritized. We must sustain a baseline quality of environment. The economy must be worked out "within" such a policy for environmental quality objectives (clean air, water, stable agricultural soils, attractive residential landscapes, forests, mountains, rivers, rural lands, parks, wildlands, wildlife, renewable resources). Winds blow, rains fall, rivers flow, the sun shines, photosynthesis takes place, carbon recycles all over the landscape. These processes must be sustained. The economy must be kept within an environmental orbit. Development is desired; but even more, society must learn to live within the carrying capacity of its landscapes. The model is land as community. "Sustainable" is an economic but also an environmental

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[21] Ibid, IV 16.
[22] Ibid, The Way Forward.

term. Again, the Earth Charter has this focus: "Secure Earth's bounty and beauty for present and future generations."[23]

Sustainable; but sustainable what? The Earth Charter refers only once to Earth as a "biosphere," a global system. "The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems."[24] The Ecological Society of America puts that term in central focus: "Achieving a sustainable biosphere is the single most important task facing humankind today."[25] The fundamental flaw in "sustainable development" is that it sees the Earth as commodity only. The Earth Charter clearly sees a community of life: "We are one human family and one Earth community with a common destiny."[26] Further it entitles a whole section: "Ecological Integrity." Perhaps we can regard that, made globally inclusive, as tantamount to advocating a sustainable biosphere.

The underlying conviction in the sustainable biosphere model is that the current trajectory of the industrial, technological, commercial world is generally wrong, because it will inevitably overshoot. The environment is not some undesirable, unavoidable set of constraints. Rather, nature is the matrix of multiple values; many, even most of them are not counted in economic transactions. In a more inclusive accounting, nature provides numerous other values (aesthetic experiences, biodiversity, sense of place and perspective), and these are getting left out.

We have not brought Earth's population into sustainable relationship with the landscapes that we inhabit. The problem is the number of people; the problem also is the level of their expectations. In an expanding and increasingly consumptive population, desires escalate faster than resources can be developed to satisfy them. Unless these forces can be curbed, the mismatch between humans and their landscapes will only grow worse. People and their Earth have entwined destinies; that past truth continues in the present and will remain a pivotal concern in the new millennium. Humans can move further than just thinking of themselves as local citizens, even as national citizens, and reach this more inclusive sense of worldwide entanglements. Sustainable development is impossible without a sustainable biosphere. That remains true even if we move beyond economic values to a spectrum of non-economic human values that humans enjoy in their natural environments. Thinking of a biosphere is still more planetary, global, whole-Earth oriented. There is something morally naive about living in a reference frame where one

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[23] Ibid, Principle I, 4.

[24] Ibid, Preamble.

[25] Paul G. Risser, Jane Lubchenco, and Samuel A. Levin, "Biological Research Priorities–A Sustainable Biosphere" (1991) 47 *BioScience* 625–627.

[26] Earth Charter, above n. 17, Preamble.

species takes itself as dominant and values everything else as a resource to be developed, even if we phrase it that we have entwined destinies with our ecosystems, with our planet. The vision we need ought to focus priority on the fundamental survival unit: a sustainable biosphere.

4. EARTH CHARTER AND (SOCIO)ECOLOGY

The Charter features "ecological integrity": "Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life."[27] Yet the Charter is not primarily a scientific document. The focus of interest is human ecology, socio-ecology. *Homo sapiens*, a late-coming species, has developed an extensive cultural history. This human story, a marvel on Earth, has quite recently shown dramatic developments – alarming because, on the course taken in the last few centuries, neither natural nor cultural history can long be sustained in their rich variety. We are unleashing planetary effects unprecedented in either the several hundred thousand years of human history or the several billion years of Earth's history.

We need a strategic action plan for human social behaviors as these relate to integral ecologies; this requires a sense of environmental commons, of ecological commonwealth. On the one Earth are over 200 sovereign nations. The Earth is plural in its landmasses; it supports myriad ecosystems, diverse species, a variety of peoples; and it is also one global, biological community in which humans reside. When we try to relate persons to their planet, we must plan across a scale that passes through individuals in local communities, through national sovereignties and cultural diversities, through economic and social institutions. National and regional communities as political and economic units must come into intelligent relationship to their geography and ecology, and regional solutions must integrate into global systems on a whole Earth. We must place ourselves in "the larger whole of which we are all a part."[28]

The Earth Charter is right on target:

> To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace.[29]

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[27] Ibid, Principle II, 5.
[28] Ibid, Section 16.
[29] Ibid, Preamble.

There are 82 imperative verbs in its two and a half pages of principles: "Respect Earth;" "Care for the community of life;" "Prevent harm;" "Prevent pollution;" "Build democratic societies;" "Reduce, reuse, and recycle;" "Provide educational opportunities;" "Ensure that. . ." (seven times); and "We must. . ." (eight times).

Yes, there is description of natural facts (ecology) and human behaviors (sociology, psychology); but there is immediate moving from *is* to *ought*. Premise: "We stand at a critical moment in Earth's history." Conclusion: "We urgently need a shared vision."[30] "We must commit ourselves."[31] The Earth Charter aspires to take Aldo Leopold's vision and expand it globally. "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."[32] Such a conclusion has been justly celebrated; it also returns us to justifying moving from fact to value.

The Earth Charter presents overall a convincing vision. One form of life has never endangered so many others. Never before has this level of question – the global degradation and extinction of life on Earth – been deliberately faced. Earth is the only planet "right for life;" it seems "right" that life continue here. Life is, in the deepest sense, the most valuable phenomenon of all. Humans have more understanding than ever of the natural world, more predictive power to foresee the intended and unintended results of their actions, and more power to reverse the undesirable consequences. Such capacity and knowledge generate increased obligation strategically to plan for the conservation of the global Earth. Did not we just conclude that the fundamental survival unit is a sustainable biosphere, and that our priority commitment ought to be to sustain it?

But the Charter also urges commendable social norms that do not evidently have anything to do with integral global ecology: "Build democratic societies." How does one get from stability or integrity in natural ecosystems to: "Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development?"[33] Or: "Affirm gender equality and equity as prerequisites to sustainable development?"[34] The argument seems to be that if and only if children and youth are appropriately well educated can they be expected actively to press for sustainable development, and one required aspect of such education is gender equality. The Charter urges justice (seven times). The background presumption seems to be that if

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30 Ibid, Preamble.
31 Ibid, The Way Forward.
32 Aldo Leopold, *A Sand County Almanac* (Oxford University Press, 1968) viii–ix.
33 Earth Charter, above n. 17, Principle IV, 14a.
34 Ibid, Principles, III, 11.

a society is not just, it cannot be sustainable. "Ensure that communities at all levels guarantee human rights."[35] Amen. But do we learn that from ecology?

We noticed before that the Charter celebrates cultural diversity as "a precious heritage." Now we discover that cultural diversity is not welcome unless it is democratic, with the children well educated in gender equality, and with an appropriate sense of justice and human rights. Critics will say, with considerable justification, that the Earth Charter blends a liberal social agenda with nature conservation, and is naive about the logical and ethical connections.

Engel wants to think of this as "natural moral law." He urges a "firmer grasp of the truth of moral and physical natural law that stands in judgment of every finite and limited human understanding and practice."[36] He praises "freedom, equality, and solidarity," and:

> dares to extrapolate those principles from their intra-human context to our relationships with other species and the Earth, envisioning the time when we may extend to nature a fundamental liberty and equality, when we may co-exist with all species in solidarity on the shared commons of our planet.[37]

He wishes to "judge how adequately we have justified and promoted its moral authority."[38] "We have access to the essential structure of reality and its moral requirements. . . in keeping with the natural laws of our physical and moral being by virtue of our inherent capacities for reason, persuasion and moral choice."[39] The justification seems to lie in something like the classical appeal to a natural moral law written on human hearts; although Engel has to "dare extrapolating" this to a more widely inclusive community than ever before, advocating a radically "new axial age."

Whether there is any such natural or physical moral law and, if there is, what it has classically demanded and what novel demands are now being made in this "new covenant" are problematic questions. Engel's hope can be compared to Michel Serres' "natural contract," which leaves us both pleased that a French philosopher is thoughtful about nature and wondering how humans can enter into a contract with a nature that, though providing life support, cannot reciprocate as a contract partner.[40] We shall return to the nature of these new covenantal duties. But it is best to do this after wondering more about the ambiguous character of biological nature.

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35 Ibid, Principles I, 3.
36 Engel, above n. 2, xvii.
37 Ibid.
38 Ibid.
39 Ibid.
40 Michel Serres, *The Natural Contract* (University of Michigan Press, 1995).

5. EARTH CHARTER AND EVOLUTIONARY NATURAL HISTORY

"Humanity is part of a vast evolving universe.'"[41] Life is a long-sustained epic of survival, a natural history of speciation and respeciation in the midst of perpetual perishing, tested for adapted fit. The Earth Charter celebrates the communities of life on Earth, integral ecologies, but it does not address at all the philosophical challenges of evolutionary natural history.

Wild nature contains only the thousandth part of creatures which sought to be, but rather became seeds eaten, young fallen to prey or disease. The Darwinian revolution has revealed that the governing principle is survival in a world thrown forward in chaotic contest, with much randomness and waste besides. The wilderness teems with its kinds, but is a vast graveyard with 100 species laid waste for one or two that survive. Reacting to the Darwinian view, T.H. Huxley argued that the values society most cherishes depend "not on imitating the cosmic process, still less in running away from it, but in combating it."[42] If so, can there be value in the wild holocaust, any reason for the Earth Charter to preserve or admire it?

Perhaps we will cry that there is only a survival value whose operation hurts too much for us to value it more. Everything is making a resource of something else, so far as it can, except when it is resisting being made a resource of. The jumping spider eats the fly, the worms the opossum, the coyote the ground squirrel, which eats the grass and its seeds, which grow in the rotting humus. The salamander is making a resource of the mosquito; the mosquito of me. Wildness is a gigantic food pyramid in a grim death-bound jungle. Nothing of the compassion or morality which we value in culture is found there. Nothing recognizes anything else's rights (as the Charter insists that we ought to do). How can the Earth Charter recover a positive orientation in such a negative picture?

Wild nature can seem a great scene of disorder. Still, it is also a great scene of the pumping out of disorder. Refocusing the picture, a more astonishing mystery is that life struggles, but has achieved so much, pumped up out of the soil, persisting on with ever novel arrivals. The marvel is how dirt spontaneously assembled itself into Cambrian worms, later into Cretaceous opossums and still later into wondering humans. In the wild, things are degraded, fol-lowed by nature's orderly self-assembling of new creatures. Earth slays her children, a seeming great disvalue, but bears an annual crop better adapted in their stead.

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[41] Earth Charter, above n. 17, Preamble, Earth Our Home.

[42] Thomas H. Huxley, *Evolution and Ethics* (D. Appleton & Co, 1894) 83.

An integral ecology locates individual lives on larger horizons, as goods of their kind in an ecosystem greater than they know. We can subsume struggle under the notion of a comprehensive situated fitness. Forms live on which more efficiently utilize food resources, take better care of their young, learn to form societies, fill niches not exploited by others. The survival of the fittest results in the ever more fit in their habitats. Each is for itself, but none is by itself; each is tested for optimal compliance in an intricately disciplined community. Every organism is an opportunist in the system, but without opportunity except in the ongoing system, the anastomosing of life threads that weaves an ecosystem.

Wildness is an unquenchable, pro-life force in this respect, however groping, blind and unmerciful it may otherwise seem. Survival value has its upstrokes; and out of seeming disorder, order comes the more. Problem solving is a function of the system too, as it recycles, recovers from setbacks, speciates, increases sentience and complexity, pulls conflicts into harmony and redeems life from an ever-pressing death.

The surplus of offspring is cut back by premature death, predation, disease, starvation; but this cutback is executed so as, on statistical average, to leave the smarter, faster, more fertile, efficient and wary. The surplus of young permits both mutational advance and the synthesis of biotic materials with higher forms at the top of the pyramid. The coevolutionary race goes on. On the short scale, values may seem hopelessly relative and impossible to evaluate; but in the whole, biomass and energy are transubstantiated and recycled so that wildness is a no-waste world, frugal in its economies.

We begin to get a new picture painted over the old, although some of the old picture still shows through. Wildness seemed a great struggle, and so it is; but it is also a great flowing of opposites into each other. Like a quilt, wildness is a complex tapestry of values on the one side, though it can seem a jumble of values on the other. There are checks and balances that pull conflict into ordered equilibrium. Periods of chaotic upset, even great extinctions, result in regenerated creativity.

The Earth Charter, with its four pages, cannot be expected to address these issues, though in his extensive writings Engel might. Meanwhile, Engel correctly senses that contemporary humans, who now understand Earth's evolutionary history and biodiversity more deeply than any humans before us, have yet more valuational work to do, enlarging their ethic with a deeper respect for the global community of life. From the Earth Charter, the most we get for any specific ethics for animals is:

> Treat all living beings with respect and consideration.
> a. Prevent cruelty to animals kept in human societies and protect them from suffering.

b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.
c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.[43]

Amen. But none of this follows from natural law or natural processes.

Neither the Earth Charter nor Engel has a tragic view of life. The music of life is in a minor key. Life is both prolific and pathetic. The fertility is close-coupled with the struggle. Biological nature is always giving birth, always in travail. This "giving birth" requires "labor," and the birthing metaphor, making possible this continuing regenerating, seems inseparable from elements of struggle (as every mother knows). In the midst of its struggles, life has been ever "conserved," as biologists say; life has been perpetually "regenerated," "redeemed," as theologians might say. Something is always dying, and something more is always living on. This dimension of the "new covenant" and the "natural contract" will have to be addressed to make the "commitment" to embrace a "whole-hearted" Earth ethic realistic.

6. EARTH CHARTER AND PLEISTOCENE GENES

The Earth Charter is a future-oriented creed for a new age. But there is another biological legacy, deep in our past. Humans are not well equipped genetically to deal with the sorts of global-level problems we now face. Our inherited human nature works against us.

One might first think that since humans evolved as good adapted fits in their environments, human nature will complement wild nature. Biologists may call this "biophilia" – an innate, genetically based disposition to love animals, plants, landscapes with trees, open spaces, running water.[44] Critics find this a half-truth because disconfirming evidence is everywhere. True, people like a house with a view, with a garden; but they do like a house, a big one. The really natural thing for humans to do (our genetic disposition) is to build a culture differentiating ourselves from nature. Human agriculture, business, industry, development consume most of our lives. Biophilia might be a positive Pleistocene relic. But any residual biophilia is weak before our much more powerful desires for the goods of culture.

Our evolutionary past did not give us biological controls on our desires for goods that were in short supply. We love sweets and fats, of which in Pleistocene times humans could seldom get enough. But now we overeat and grow fat. In Pleistocene times, given infant diseases and child mortal-

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[43] Earth Charter, above n. 17, Section 15.
[44] Edward O. Wilson, *Biophilia* (Harvard University Press, 1984).

ity, humans could barely reproduce enough offspring to leave an ongoing replacement population in the next generation. Today we love sex and over-reproduce. Generally, that is a model for the whole escalating growth and over-consumption problem.

There are few biological controls on our desires to amass goods; for most people, it has always been a struggle to get enough (indeed, for most it still is). When we can consume, we love it and over-consume. Consumer capitalism transmutes a once-healthy pattern of desires into avarice, intemperance. With escalating opportunities for consumption, driven by markets in search of profits, we need more self-discipline than comes naturally. Our self-interested tendencies overshoot; we love ourselves and find it difficult to know when and how to say "Enough."

When the economists, philosophers, theologians get into the conversation, these ancient appetites can still seem more positive than negative. For all of human history, we have been pushing back limits. Humans have more genius at this than any other species. Especially in the West, we have lived with a deep-seated belief that life will get better; that one should hope for abundance and work toward obtaining it. Economists call such behavior "rational;" humans will maximize their capacity to exploit their resources. Moral persons will also maximize human satisfactions – at least those who support the good life, which must not just include food, clothing and shelter, but an abundance, more and more goods and services. Such growth is always desirable.

In the West, we have built such growth into our concept of human rights: a right to self-development, to self-realization. Such an egalitarian ethic scales everybody up and drives an unsustainable world. When everybody seeks their own good, there is escalating consumption. When everybody seeks everybody else's good, there is, again, escalating consumption.

The classical institutions – family, village, tribe, nation, agriculture, industry, law, medicine, even school and church – have short horizons. We are genetically driven to care for children, grandchildren. Far-off descendants and distant races do not have much "biological hold" on us. Across the era of human evolution, little in our behavior affected those remote from us in time or in space, and natural selection shaped only our conduct toward those closer. So we have a biological legacy coupled with a moral legacy that endorses continuing development on our local and national landscapes. Genes far older than Pleistocene genes impel us to make territorial claims. Nothing can survive that cannot protect its home range. We must build fences, defend our borders, protect our security.

Global threats require us to act in massive concert of which we may be incapable. Pleistocene genes do not cover long timespans, but global sustainability must. The urging of our innate nature cumulatively, often insidiously, forces behaviors that degenerate our shared ecological systems – a genetic

version of Garret Hardin's "tragedy of the commons."[45] If so, humans may bear within themselves the seeds of their own destruction. More bluntly, more scientifically put: our genes, once enabling our adaptive fit, will in the next millennium prove maladaptive and destroy us. The Earth Charter is up against human nature.

Is there any hope? Humans can sometimes gain larger frames of reference. The European Union has transcended national interests with surprising consensus about environmental issues. Kofi Annan, when Secretary General of the United Nations (UN), praised the Montreal Protocol to protect the global ozone layer, with its five revisions, ratified by every UN member nation (197 nations) and implemented as the most successful international agreement yet. We saw, Fall 2015 in Paris, a still more promising agreement, involving almost every nation on Earth, to seek to limit global warming to less than 2 degrees Celsius. Pope Francis' recent encyclical enlists the Catholic Church toward concern for global care and justice. But the self-interests of each American and of nationalist America have returned in contemporary US politics.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has been signed by 112 nations. Over 150 international agreements (eg, conventions, treaties, protocols) registered with the UN deal directly with environmental problems.[46] So there is some evidence that we can sometimes make these larger collective visions work.

Humans have proved capable of advanced skills never dreamed of in our ancient past – flying jet planes, building the Internet, decoding their own genome and designating world biosphere reserves. It would be tragic in the future if we let our leftover Pleistocene appetites become a useful alibi for continuing our excesses. *Homo sapiens* can and ought to be wiser than that. The Earth Charter sets forth this higher hope: a "spiritual potential of humanity."[47] But we must still push the question: is this realistic?

7. ENFORCING THE EARTH CHARTER?

The Earth Charter is an aspirational document at the same time urging that its ideals be put into practice. The Charter seeks to persuade; but we need also environmental enforcement, regulation. That is neither possible nor appropriate for the Charter in itself. The Charter is, on the strongest interpretation,

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[45] Garrett Hardin, "The Tragedy of the Commons" (1968) 162 *Science* 1243–1248.

[46] United Nations Environment Programme, *Register of International Treaties and Other Agreements in the Field of the Environment* (United Nations Environment Programme, 1997) and Iwona Rummel-Bulska and Seth Osafo (eds.), *Selected Multilateral Treaties in the Field of the Environment, II* (Grotius Publications, 1991).

[47] Earth Charter, above n. 17, Principle, 1.

soft law. It works more like a creed than a law. Engel wants to call it a "covenant," but that is a rather flexible term.[48] Covenants can be legally binding, or they can be creedal. The Apostles Creed has been shared by Christians worldwide across thousands of years, though it does not give much immediate guidance. Nor is it appropriate to enforce it legally. The Ten Commandments are a summary of the Jewish covenant, shared by Christians, and they do give a sense of overarching governance to the moral life. We do enforce some of the commandments, such as not stealing or killing.

The Charter will need supplementing through judicial means and diplomacy, enforced by governments, with police powers. "The nations of the world must. . . support the implementation of Earth Charter principles with an international legally binding instrument on environment and development."[49] Law-like forms of ethics are in disrepute these days. Critics say that "command and control" is too adversarial. We need incentives. Use carrots, not sticks. Philosophers say, "Ethics needs to be based on virtues and not laws."

True, you don't need to write laws for virtuous people; they will do the right thing without command and control. Yet only a small number of Earth's residents can be expected to live voluntarily by the Charter's high ideals. With their Pleistocene genes, the vast number of the 7 billion persons on Earth will take a lot of nudging in that direction.

We do legislate environmental care – the Clean Air Act, the Marine Mammal Protection Act, the Wilderness Acts. If you add up every regulation from international agreements and Acts of Congress to EU environmental standards, right down to waste pickup and campsite regulations, we might say that most environmental ethics is "enforced" at some level or another. When we are dealing with the common environment, there are many things we cannot protect unless we protect them together, because it turns out that many individually good behaviors in the aggregate turn into "bads." Whatever we believe about the invisible hand in some parts of the marketplace, we do not think there is any invisible hand that aggregates individual goods into public benefits in global Earth care.

People want clean air, and yet, we could not have achieved the clean air standards that we have in the United States without legal enforcement – auto emissions regulations, for instance. Likewise with clean water. These are things that everybody wants; and yet you cannot achieve such public goods without policing.

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[48] J. Ronald Engel, "A Covenant Model of Global Ethics" (2004) 8 *Worldviews: Environment, Culture, and Religion* 29-46.

[49] Earth Charter, above n 17, The Way Forward.

The Earth Charter will get nowhere unless nations widely enact similar environmental laws (toxic pollution, water quality, required environmental impact assessments, migratory wildlife), which are more and less enforced.[50] The European Union has required that all its member states enact environmental impact statements since 1985.[51] There is enforcement of the provisions of the International Whaling Commission, the Convention on Biological Diversity, CITES, the Law of the Sea, and agreements about animal welfare. National parks have been established in virtually every nation on Earth in which there is enforcement of environmental conservation, in some nations already quite forcefully (shooting rhino poachers in Africa), if in others as yet far too lax. The point is that the Earth Charter is not a standalone document, but effective only with supporting enforcement. Nor can the detail of these enforcements be immediately deduced from the broadly inclusive ethical imperatives of the Charter.

Consider property rights. Environmental law constrains property rights to protect the common good. Property rights are not absolute. There has long been concern, even legislation, about spillover damages. More recently, environmental concerns have been modifying our convictions about what property rights entitle us to do and what responsibilities they bring. "Environmental law has always had an interest in property rights, and, in fact, owes its very existence to the dark side of property rights, their ecological blindness."[52] The Earth Charter can point in new, more inclusive directions, but will accomplish little without the enforcements of more environmentally sensitive uses of property.

Thinking in these new directions, interestingly, there is a sense of obligation to the land itself, the integrity of the landscape, the ecology. David Hunter remarks:

> The obligations are not defined by the "state," but rather by the nature of the land itself: land as part of a larger ecosystem imposes its own obligations. The obligations imposed on land owners by the environment are independent of the obligations

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[50] Nicholas A. Robinson, "EIA Abroad: The Comparative and Transnational Experience" in Stephen G. Hildebrand and Johnnie B. Cannon (eds.), *Environmental Analysis: The NEPA Experience* (Lewis Publishers, 1993) 679–702.

[51] R. Coenen, "NEPA's Impact in Environmental Impact Assessment in European Community Member Countries" in Stephen G. Hildebrand and Johnnie B. Cannon (eds.), *Environmental Analysis: The NEPA Experience*, (Lewis Publishers, 1993) 703–715.

[52] Klaus Bosselmann, "Property Rights and Sustainability: Can They Be Reconciled?" in David Grinlinton and Prue Taylor (eds.), *Property Rights and Sustainability: The Evolution of Property Rights to Meet Ecological Challenges* (Martinus Nijhoff Publishers) 28.

> imposed by the "state." The state's apparatus is only necessary to interpret and enforce the land's demands of property owners.[53]

That returns us to thinking of the Earth Charter's vision of a (socio)ecology.

Engel admires "the vision of global moral governance set forth by the Earth Charter."[54] He interprets "the Earth Charter as a New Covenant for Democracy."[55] He hopes for "global governance,"[56] for "democratic Earth governance,"[57] and for "Earth Democracy."[58] These hopes may raise some concern for many, myself included, who worry that a global government in any form similar to that of contemporary nation states is likely to be more problematic than problem solving. I have been surprised and pleased with the emergence of the European Union in my lifetime. I can wish for more effective regional cooperation in Africa, South America or Asia. But global governance raises concerns about a totalitarian world government. Ethicists need now and forever in the future to remember Lord Acton: "Power tends to corrupt and absolute power corrupts absolutely."[59]

Engel mellows out such fears: "The communities of the world weave a complex global tapestry that combines autonomy and shared authority."[60] Engel argues further that:

> Earth Democracy. . . is a protean metaphor (Earth = democracy) that bridges the differences of humans and nature by embracing the intrinsic values of each and a rich metaphoric complex of relationships such as liberty, equality and solidarity that support the ongoing creative evolution of these intrinsic values. Thus Earth Democracy is a symphony.[61]

We might try to envision such an Earthy democratic symphony. This seems to be a metaphorical call for democracies to address ecological problems. Of course, neither plant nor animal behaviors are democratic. Nor are wind, rain,

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[53] David Hunter, "An Ecological Perspective on Property: A Call for Judicial Protection of the Public's Interest in Environmentally Critical Resources" (1988) 12 *Harvard Environmental Law Review* 311–383, 319.

[54] Engel, above n. 48, 29.

[55] J. Ronald Engel, "The Earth Charter as a New Covenant for Democracy" in Peter Miller and Laura Westra (eds.), *Just Ecological Integrity: The Ethics of Maintaining Planetary Life* (Roman and Littlefield, 2002) 37–52.

[56] J. Ronald Engel, "The Earth Charter Covenant" in Peter Blaze Corocoran, Mirian Vilela, Alide Roerink, (eds.), *The Earth Charter in Action* (KIT Publishers, 2005) 39.

[57] Engel, above n. 2, xv.

[58] Ibid, xxviii.

[59] Lord Acton, *Essays on Freedom and Power* (Free Press, [1887] 1949) 364.

[60] Engel, above n. 56, 39.

[61] Engel, above n. 2, xxviii

rivers, mountains, canyons. Evolutionary natural history, we were saying, is a struggle for survival. Earth was an organic symphony with ecosystem integrities for billions of years without any democracy. Democracy has rarely appeared even among humans.

Any symphony of Earth Democracy is visionary with a positive touchy-feely ring. We like to be part of communities. But there is little help in working out the details of inter-species relationships or international affairs or, among the human governors, of legitimate authority and protections from abuse. To ask us for an "unconditional covenant commitment"[62] to this symphony, "something to which we give ourselves wholeheartedly"[63] is to ask for something we know not whereof.

8. EARTH CHARTER FOR THE HOME PLANET

Still, though, we can commit ourselves to caring for this home planet. The first paragraph of the Charter, after the Preamble, is titled: "Earth, Our Home." "The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life."[64] In the new millennium, in the new axial age, what the Earth Charter can do, with its more daring vision, is force us to ask what kind of responsibilities we have to, toward or concerning our Earth – the only home planet we know.

Even for environmentalists who love their Earth, it may prove a stretch to think of a "covenant" (Engel's favored term) with dirt, earth; even with a planet full of it. Earth cannot be a reciprocal partner in any mutually agreed upon covenant. Nor can the biosphere. The classical way has been to think of "stewardship" of lands that we ought to use responsibly. For millennia, humans have argued for the stewardship of land. Such concepts were held by our ancient ancestors so far back that they didn't know they were on a planet, much less threaten the biosphere. They lived in a promised land, a gift of God; today we live on a promising Earth with "gratitude for the gift of life."[65] Humans are trustees with a "sacred trust."[66]

It is perhaps still difficult for most persons to think of themselves as Earthlings, much less to behave that way. Those Pleistocene genes tend to make self, family, tribe and nation constitutive of our identity. Yet views of Earth from space have given us an emerging vision of an Earth community. "Once a photograph of the Earth, taken from the outside is available. . . a new

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62 Engel, above n. 1, 65.
63 Ibid, 73.
64 Earth Charter, above n. 17, The Challenges Ahead.
65 Ibid, Preamble, Universal Responsibility.
66 Ibid, Earth Our Home.

idea as powerful as any in history will be let loose."[67] Views of Earth from space are the most impressive photographs ever taken, if one judges by their worldwide impact. They are the most widely distributed photographs ever, having been seen by well over half the persons on Earth. They invariably trigger the idea of the unity and community of the home planet, our global responsibility. Leaving home, we discover how precious a home is. The distance lends enchantment, brings us home again. We get put in our place.

We are natives, naturally born on Earth, just as much as we are born nationals, citizens of a political state. An opportunity that we face from here onward, indeed a necessity thrust upon us, is to see Earth globally, to see ourselves as Earth residents with global interests. In national circles, we may leave the domestic and go foreign. We plan for ourselves, our nation, defend our home interests and pursue our concerns accordingly. But in planning for life on Earth, there is no domestic and foreign; we are all natives. Dealing with a nation state, we think citizens should defend their territory and their goods. But on the global scale, Earth is not something we own. Earth does not belong to us; rather, we belong to it. We belong on it. The question is not of property, but of whole-Earth community.

A clod of dirt, just some earth (spelled with the lower case "e"), is not an appropriate ethical partner. But when we go from earth to Earth, from dirt to the prolific planetary system of which it is part, perspectives change. On that scale, the human, made of earth, is first and always an Earthling. On this enthralling Earth, we live and move and have our being. A century ago, a call for community was typically phrased as the brotherhood of man and the fatherhood of God. Now such a call must be more ecological, less paternalistic: a call for appropriate respect for this home Earth.

Edgar Mitchell, viewing Earthrise from the moon, was Earthstruck:

> Suddenly from behind the rim of the room, in long, slow-motion moments of immense majesty, there emerges a sparkling blue and white jewel, a light, delicate sky-blue sphere laced with slowly swirling veils of white, rising gradually like a small pearl in a thick sea of black mystery. It takes more than a moment to fully realize this is Earth–home.[68]

Michael Collins recalls:

> I remember so vividly what I saw when I looked back at my fragile home – a glistening, inviting beacon, delicate blue and white, a tiny outpost suspended in the

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[67] Astronomer Fred Hoyle, quoted inside front cover of Kevin W Kelley, *The Home Planet* (Addison-Wesley, 1988).

[68] Ibid at photographs 42–45

> black infinity. Earth is to be treasured and nurtured, something precious that must endure.[69]

There is a vision of an Earth ethic in what these astronauts see. Humans are the only evaluators who can reflect at global scales. When humans do this, they must set up the scales. Animals, organisms, species, ecosystems – Earth cannot do this. But they do display what is to be measured. Earth (as seen from space) is quite a wonder. Several billion years' worth of creative toil, several million species of teeming life, have been handed over to the care of this *Homo sapiens*, the wise species in which mind has flowered and morals have emerged. Ought not those of this sole moral species do something less self-interested than count all the produce of an evolutionary ecosystem resources to be valued only for the benefits they bring? Such logic is too provincial for moral humanity. We Earthlings ought to care for this home planet – the biology of ultimate concern. Enabling us for that in the forthcoming Anthropocene Epoch is the promise of the Earth Charter.

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[69] Michael Collins, "Foreword" in Roy A. Gallant, *Our Universe* (National Geographic Society, 1980) 6.