

Toward an Ethic of Sustainabilityⁱ

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I believe we need a clearly defined *Ethic of Sustainability* to guide the modern sustainability movement in the way that Aldo Leopold's *Land Ethic* guided the conservation movement. Leopold's Land Ethic is credited with defining a new relationship between people and nature, setting the stage for the modern conservation movement.¹ In the words of Leopold, “The land ethic simply enlarges the boundaries of the [human] community to include soils, waters, plants, and animals, or collectively: the land.”² A similar sustainability ethic would enlarge the boundaries of nature to include humans and would extend the boundaries to include those of future as well as present generations. The ethic also would need to focus on the unique responsibilities and rewards of humans as caretakers or stewards of the integral community of the earth, since its purpose would be to guide the decisions and actions of humans.

For purposes of this discussion, I have defined an ethic as: a set of rules of behavior based on individual or collective ideas about what is morally good and bad and thus is right and wrong. An ethic can be individual, communal, or societal and thus can guide the decisions and actions of individuals, communities, societies, or humanity as a whole. An ethic of sustainability ultimately must eventually encompass humanity, if the global sustainability movement is to succeed in its mission. However, individual ethics eventually shape communal ethics and communal ethics shape societal ethics, which ultimately guide the evolution of humanity.

I am proposing rather than proclaiming an ethic of sustainability. Hopefully, my proposal will initiate a process that eventually evolves into an actual ethic of sustainability. I am aware that such has already been written regarding the ethics of sustainability. I have not attempted to review the relevant literature, but will simply acknowledge that others know far more than I do about academic perspectives relating ethics to sustainability. Several well-referenced books dealing with the subject treat ethics to be an essential dimension of sustainability.³ Other surveys of academic literature have found that some academics consider the ethical dimension of sustainability to be obsolete, considering it to be too general and vague to accommodate modern concepts of science.⁴ I take the counter position in that ignoring ethics in sustainability is like ignoring ethics in general as being too vague. We simply cannot ignore questions concerning what we *should* and *should not* do, regardless of the elusiveness of the answers.

Perhaps somewhere in all the literature there is a concise treatment the ethics of sustainability similar to Leopold's Land Ethic. So, “Why try and reinvent the wheel?” As I responded in a recent article proposing a food ethic, “I suspect the person who invented the wheel was criticized for trying to reinvent the *sled*.”⁵ I believe a straightforward ethical statement

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such as Leopold's Land Ethic, meaning one that is readily understandable and makes sense to people in general, is needed to guide the sustainability movement.

Leopold's Land Ethic mostly simply stated is: “*A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.*”⁶ I propose the following maxim for an ethic of sustainability: *A thing is right when it tends to enhance the quality and integrity of all life on earth by means that honor the unique responsibilities and rewards of humans as members and caretakers of the earth's integral community. A thing is wrong when it tends otherwise.*” I believe it is important that we begin to guide the sustainability movements by questioning what is right and wrong.

Sustainability has been defined in many different ways by different people. Many definitions obviously are constructed or selected to allow individuals and organizations to maintain the unsustainable status quo. However, those of us who take the concept seriously generally use some variation of the definition of sustainable development in the UN commissioned Brundtland Report of 1989.⁷ I like this simple variation: “Sustainability is the ability to meet the needs of the present without diminishing opportunities for the future.” The ethical dimensions typically are associated with the commitment to meeting the needs of “all” in the present while leaving “equal or better opportunities” for those of the future, which is clearly implied, if not always understood. Even those who choose to avoid the ethics questions seem to understand that sustainability has important ethical dimensions. Sustainability includes concerns for both intra-generational and inter-generational equity or justice, which are inherently ethical or moral concerns.

My proposed ethic of sustainability includes even deeper ethical implications. Perhaps most important, it concludes that some “things,” meaning human decisions and actions, are “right” and others are “wrong”. Questions of right and wrong are clearly ethical and moral in nature, yet I believe they must be addressed if we are serious about sustainability. Failing to do so has allowed questions of sustainability to be marginalized by scientists and trivialized or coopted by corporation and government agencies. As Pope Francis observes in his Encyclical *Laudato Si, for Care of our Common Home*, “we can note the rise of a false or superficial ecology which bolsters complacency and a cheerful recklessness. Such evasiveness serves as a license to carrying on with our present lifestyles and models of production and consumption.”⁸

In keeping with Pope Francis' Encyclical, my proposed ethic of sustainability reflects an “integral worldview.” All life on earth, including all aspects of human life, is viewed as integrally interconnected and interdependent, and all living things are integrally connected with all non-living things on earth.ⁱⁱⁱ Ultimately, sustainability is about sustaining the ability of the earth to sustain itself as a *living* planet. A person's worldview is a specific perception of how they believe the world works and their place within it. One's worldview depends on his or her perceptions of the role of humans within the whole of earth, as individuals and as collectives. Worldviews cannot be proven because one's worldview ultimately determines what he or she is willing to accept as facts or “proof” and what is discarded as fallacy. Thus, acceptance of a

ⁱⁱⁱ For a deeper discussion of worldview and sustainability, see John Ikerd, Lonnie Gamble, and Travis Cox, “Deep Sustainability; The Essentials,” 2015 <https://sites.google.com/site/sustainabilitydeep/>.

worldview, integral or separable, is inherently a spiritual, metaphysical, or philosophical decision.

The integral worldview of sustainability is anthropocentric in the sense that it is concerned with the sustainability of humanity - specifically. However, it is ecocentric in the sense that it recognizes that the sustainability of human life on earth is integrally connected with all other living and non-living things on earth. In *Laudato Si*, Pope Francis consistently calls for “integral and sustainable development.”⁹ The proposed ethic of sustainability is integral-ecological in that it accepts the proposition that human well-being is critically interdependent with the well-being of all other living and non-living elements of reality. And, it is integral-sociological in that it gives specific attention and consideration to the critical interdependencies among the ecological, social, and economic dimension of human well-being. In the style of Leopold, *The ethic of sustainability enlarges the boundaries of human communities to include the integral whole of ecology, society, and economy.*

Energy is the most critical physical connection between the sustainability of human life on earth and the life of the other living things on earth. Everything of any use to us, including everything of economic value, ultimately comes from the physical elements of the earth - air, water, soil, minerals, and energy. Furthermore, the physical usefulness of the other elements of the earth to humans depends on their ability to provide humans with *useful energy*. Our food, our clothes, our houses, and our cars all require energy to make and energy to use. Even our imagination, creativity, and thinking require energy, as about one-fifth of the energy used by the human body is used by our brain. It also takes physical and mental energy to reproduce, nurture, socialize, and educate each new generation of humans.

The first law of thermodynamics states that energy can neither be created nor destroyed, so sustaining life on earth might seem easy. However, the second law of thermodynamics states that each time energy is used, or reused, to do anything useful, some of its usefulness is lost. Energy isn't destroyed by use, but it always changes in form in ways that diminish its usefulness. Thus, the universe as a whole is slowly trending toward a state of uselessness, which physicists call entropy. However, the living earth as a whole has the ability to move away from entropy and thus to retain its usefulness to humans in an integral relationship with the other living things on earth. This counter-entropic tendency is possibly only because of the daily inflow in new energy from the sun - meaning solar energy.

Only living things, primarily plants on land and plankton in oceans, are capable of capturing, organizing, concentrating, and storing solar energy in forms that are useful to humans, as well as other species. Humans can also capture and store useful energy, using windmills, falling water, and photovoltaic cells. However, humans are biological beings and thus are inherently reliant on the other biological solar energy collectors for their life's energy. We can't eat the electricity generated by windmills or photovoltaic cells. So, the sustainability of human life on earth is inherently dependent of sustaining the quality, integrity, and thus “usefulness” of other life on earth. The ethic of sustainability is counter-entropic, because it reflects a commitment to maintaining the ability of the living things on earth, meaning biological ecosystems, to offset the inevitable tendency toward entropy.

This focus on life is critical because, the style of Leopold: *We can be ethical only in relation to something that we can see, feel, understand, love, and have faith in.* We can't see the loss of usefulness of energy due to entropy, but we can see loss of life due to unsustainability. We can reflect our commitment to sustainability through a commitment to enhancing the quality and integrity of life on earth. As David Pruett of James Madison University states it: "There is the relentless tug of entropy on the material universe, by which iron rusts, bodies decay, aged stars collapse into black holes, and thermodynamic equilibrium known as 'heat death' ultimately prevails. Against this, there is a counter-entropic trend of complexification, by which life swims upstream against entropy."¹⁰ The ethic of sustainability is one that *sees, feels, understands, loves, and has faith in the value of life.*

This does not suggest that we should be committed to preserving every single life on earth and certainly not every potential for life. No living thing lives forever. The individual members of healthy communities or ecosystems are continually being born, growing, maturing, and dying, including members of healthy human communities. Countless gametes or sexual reproductive cells never find a mate, countless embryos are never born, and countless plants, animals, even humans, never grow to maturity. If every potential life lived to maturity, the earth would soon be hopelessly overpopulated with everything. Also, loss of life is essential to life, as every living thing lives by consuming the dead carcasses of a once-living things - or things that could have supported another life. I explain this in some detail in my article, "Toward a Food Ethic."¹¹ Sustainability is about living in harmony with nature, accepting the necessity of individuals being born, living, and dying in order to sustain the healthy and integrity of living communities and ecosystems.

Diversity is perhaps the clearest physical indicator of sustainability because healthy living systems rely on their diversity for the resilience and regenerative capacity essential for sustainability. A state of entropy or uselessness is characterized by the lack of form, structure, order, or diversity. The surface of the moon is a system as close to entropy or uselessness as most of us have seen. The current widespread loss of species diversity on earth is a clear indicator of an unsustainable global ecosystem that is trending toward uselessness. Elizabeth Kolbert, investigative writer for *The New Yorker*, in her book, *The Sixth Extinction*, cites compelling evidence of a massive die-off of non-human species, similar in rate and magnitude to five great species extinction events of the past. She points out that global climate change and other *non-human* causes obviously were responsible for the five previous major extinctions. She quotes from a plaque in an exhibit in the American Museum of Natural History's Hall of Biodiversity: "Right now we are in the midst of the Sixth Extinction, this time caused solely by human transformation of the ecological landscape."¹²

The ethic of sustainability also accepts the ethical proposition that life, including human life, is "good," and thus, a massive die-offs of life is "bad." In the style of Leopold: *That life depends on relationships among living things is a basic concept of physics, but that the unfolding of life is to be loved and respected is an extension of ethics.* If human life were not good, there would no logical reason to be concerned about whether the needs of either current or future generations of humans are met. In fact, humans likely are the greatest current threat to the quality and integrity of all other life no earth. So if human life

is not inherently good, the most logical means of sustaining life on earth in general would be to depopulate the earth of humans. “Deep ecology” makes no judgment about the goodness of humans, but sustainability does. It is concerned *specifically*, although certainly not exclusively, with sustaining human life on earth.

The ethics of sustainability accepts the proposition that humans have *agency*, meaning the ability to act independently according to individual will or intention. Humans apparently are unique among species with respect to their mental and intellectual capacity to make thoughtful decisions and take intentional actions to bring about specific desired changes in their natural environments and conditions of life. With this human agency, comes human responsibility. As Pope Francis states it: “The biblical texts are to be read in their context, recognizing that they tell us to ‘till and keep’ the garden of the world (Gen 2:15). ‘Tilling’ refers to cultivating, ploughing or working, while ‘keeping’ means caring, protecting, overseeing and preserving. This implies a relationship of mutual responsibility between human beings and nature. Each community can take from the bounty of the earth whatever it needs for subsistence, but it also has the duty to protect the earth and to ensure its fruitfulness for coming generations.”¹³

In essence, the ethic of sustainability accepts that we humans have a specific purpose to fulfill here on earth - specifically as caretakers of life on earth. Science cannot prove that our life has purpose - or that it does not. This is the reason science cannot prove that life or anything else is either good or bad. If there is nothing specifically that we should or shouldn't be doing, then there is no way to distinguish right from wrong or good from bad. Since the existence of purpose cannot be proven, the question of purpose is largely ignored by so-called modern science. Modern science implicitly assumes that life is simply the consequence of complex cause-and-effect sequences of chemical, biological, and electronic impulses set in motion by some random event in the past. Our sense that our lives have purpose and meaning are considered illusions created by the purely physical processes within our brains - or more commonly just ignored.

However, in the words of noted ecological economist, Herman Daly, “if we think that our world, our lives, and our conscious, self-reflective thinking are just a random happenstance of matter in motion... then it is hard to see why we should make any sacrifice to maintain the capacity of the earth to support life, or from where we would get the inspiration to do so”.¹⁴ As Leopold might state it: *An ethic of sustainability, then, reflects the existence of an integral conscience, and in turn reflects a conviction of human responsibility for the sustainability of life on earth.* An ethic that is rooted in purpose is rooted in faith - in spirituality and morality.

If we accept that our lives have purpose and meaning, there are logical rewards or benefits from our intentional actions that enhance the sustainability of life on earth. As Pope Francis puts it: “We are led inexorably to ask other pointed questions: What is the purpose of our life in this world? Why are we here? What is the goal of our work and all our efforts? What need does the earth have of us? It is no longer enough, then, simply to state that we should be concerned for future generations. We need to see that what is at stake is our own dignity.”¹⁵ The reward of a life of purpose is human dignity, self-respect, self-worth, in fact, purpose is essential for human well-being or happiness.

Happiness obviously depends on having enough of the material things of life to meet our basic needs. We are material beings and need food, clothing, shelter, and other things an economy can provide. However, we are also social beings: we need to care and be cared for and to love and be loved. We need positive personal relationships with other people to give our lives quality and richness. We need friendship, family, and community. We also need to feel we are being treated with equity and justice within society to sustain an acceptable quality of life. Finally, we are also moral beings; we need to feel that our lives are significant, that what we are doing is right and good. Caring for our “common home,” the earth, to give our lives purpose, meaning, dignity, worth, - completes our happiness.

Ultimately, the ethic of sustainability is rooted love. Love, at the most basic level, is a belief in inherent goodness. The object of affection may be another person, an animal, plant, inanimate object, or even an idea. True love is reflected in action intended to honor and enhance the well-being of the object of affection. Love is a matter of faith because there is no way to prove that anyone or anything is inherently good and thus deserving of love. Loving relationships may or may not have a rational basis but once established, love is largely oblivious to evidence regarding justification. Apparently, there is something about being fallible humans that creates a need to be accepted as worthy by faith rather than evidence. We apparently need to be forgiven rather than condemned at the first, or even second, betrayal of trust.

As humans, we can choose to deny the existence of purpose, the ability to define goodness, or the rationality of love. We can treat the evolution of life as an inevitable consequence of some past random event that was neither good nor bad. We can treat love as an irrational response to overactive hormones or an idea contrived or cultivated by some humans to gain advantage over others, to seek pleasure or avoid pain. We can use trusting relationships to exploit other people, and we can claim the moral high-ground as a means of social or economic advantage. As scientists or academics, we can refuse to address issues that relate to spirituality, morality, or even ethics. However, if we deny the relevance of moral and ethical values, we cannot logically claim to be concerned with questions of sustainability. There simply is no logical or rational reason for being concerned about the well-being of others, particularly those of future generations in the absence of a moral sense of responsibility rooted in a belief in inherent goodness - in love.

Repeating the proposed ethic of sustainability: *A thing is right when it tends to enhance the quality and integrity of all life on earth by means that honor the unique responsibilities and rewards of humans as members and caretakers of the earth's integral community. A thing is wrong when it tends otherwise.*

In summary, the ethic of sustainability is an *integral ethic*. It recognizes that only the living world has the capacity to capture and store the solar energy essential to offset the inevitable tendency of the non-living world toward entropy. Thus, the sustainability of human life on earth depends on the sustainability of the earth's integral community of life. We humans have a unique responsibility as the caretakers of life on earth, and happiness is our reward for a life of purpose.

It is not an *economic ethic* because economies place no value on relationships that are purely social or ethical in nature. It is not a *utilitarian ethic* because utilitarianism recognizing no purpose for anything that does not serve the interest of humans as individuals. It is not a *libertarian ethic* because the sustainability ethic is co-centric rather than anthropocentric. It goes beyond *egalitarian ethics* by respecting the purpose of other non-human and even non-living things of the earth and the “rights” of all things to fulfill their purposes. It also goes beyond *ecological ethics*, even the ethic of *deep ecology*, by recognizing the unique abilities and responsibilities of humans and thus is concerned specifically with the future of humanity.

Finally, the ethics of sustainability is an ethic of hope. It doesn't underestimate the magnitude of the challenges of sustainability, but it reflects a belief in the possibility of success - the “possibility of goodness.” The non-living world inevitably evolves toward entropy and uselessness, meaning the loss of order, structure, differentiation, hierarchy, and diminished ability to support life. However, the living world uses solar energy to move toward greater order, structure, diversity, respect for hierarchy, and greater ability support life. The evolution of human civilization, knowledge, and technology is a reflection of the natural evolution of living systems toward greater order, structure, hierarchy, and differentiation - toward greater ability to support life. We humans have evolved to have the capacity to fulfill our moral responsibilities to sustain life on earth and in so doing to sustain human life on earth. In this here is hope.

Thus far, our so-called modern civilization has used its greater knowledge and more sophisticated technologies to exploit the earth's natural and human resources to support our short-run, economic self-interests rather than to enhance the quality and integrity of the whole of life on earth. Again in the words of Pope Francis, “hope would have us recognize that there is always a way out, that we can always redirect our steps, that we can always do something to solve our problems.”¹⁶ In fact, the most critical obstacle to achieving sustainability is our individual and collective inability to recognize that we have a logical and rational motivation for fundamental change beyond our narrow, individual, economic self-interests. We know that we humans are a material, social and ethical species; we simply need to return to being fully human. We have the opportunity to help create a fundamentally better world, and in the process, find a life of happiness.

We need only recognize that our overall well-being or happiness is affected far more by the quality of our social relationships and our sense of purpose and meaning in life than by greater income or wealth - particularly for those of us in the so-called developed world. This means that we are far more likely to improve our quality of life and our happiness when we are guided by an ethical or moral sense of responsibility as caretakers of society and nature than when we are motivated by economic self-interest or greed. Sustainability ultimately depends on a spiritual, moral, and ethical awakening. As Leopold might remind us: *We can be ethical only in relation to something that we can see, feel, understand, have faith in, and love.* My hope is that we will ultimately be guided by an ethic that reflects our feelings, understanding, faith, and love - for life, for each other, and for the earth. In an unwavering faith in inherent goodness - in love -there is always hope.

End Notes:

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- ¹ The Aldo Leopold Foundation, The Leopold Legacy, *The Land Ethic*, <http://www.aldoleopold.org/AldoLeopold/landethic.shtml> .
- ² Ernest Partridge, “The Philosophical Foundations Of Aldo Leopold's "Land Ethic" *The Online Gadfly*, <http://gadfly.igc.org/papers/leopold.htm> .
- ³ Charles J. Kibert, Martha C. Monroe, Anna L. Peterson, Richard R. Plate, Leslie Paul Thiele *Working Toward Sustainability: Ethical Decision-Making in a Technological World* (New Jersey: Hoboken, Wiley Press, 2011).
- ⁴ Nelson, M. P. & Vucetich, J. A. (2012) Sustainability Science: Ethical Foundations and Emerging Challenges. *Nature Education Knowledge* 3(10):12
- ⁵ John Ikerd, “Toward a Food Ethic,” *Journal of Agriculture, Food Systems, and Community Development*, Vol 6, Issue 1, 2015.
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- ⁷ Gro Bruntland, ed. *Our Common Future*, The World Commission on Environment and Development (Oxford, England: Oxford University Press, 1987).
- ⁸ Francis “Encyclical Letter *Laudato Si'* Of The Holy Father Francis On Care For Our Common Home”. . (2015, May 24). Retrieved from http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html , para. 59.
- ⁹ Francis “Encyclical Letter *Laudato Si'* Of The Holy Father Francis On Care For Our Common Home”. . (2015, May 24). Retrieved from http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html
- ¹⁰ C. David Pruett, “On Evolution, Entropy, and Love: Three Facets of the Cosmic Story,” HUU Community Café, Presented at Harrisonburg Unitarian Universalists, June 23, 2013. <http://huuweb.org/community-cafe/on-evolution-entropy-and-love-three-facets-of-the-cosmic-story/> .
- ¹¹ John Ikerd, “Toward a Food Ethic,” *Journal of Agriculture, Food Systems, and Community Development*, Vol 6, Issue 1, 2015.
- ¹² Elizabeth Kolbert, *The Sixth Extinction - An Unnatural History*, (New York: Picador, Henry Holt & Company, 2014) p. 267.
- ¹³ Francis, *Laudato Si*, para. 67.
- ¹⁴ Herman Daly April 15, 2013 “The Lurking Inconsistency,” *Conservation Biology*, August 1999, Vol. 13 No. 4, pp. 693-94, also available at <http://steadystate.org/the-lurking-inconsistency/> .
- ¹⁵ Francis, *Laudato Si*, para. 160.
- ¹⁶ Francis, *Laudato Si*, para. 61.