Evangelical Contributions to Earth Stewardship: Laudato Si' and Stewardship as Con-Service

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The Stewardship Tradition—emerging in antiquity and continuing through the 18th century until it was effectively neutralized by the industrial revolution—was given remarkable new life June 18, 2015 with the encyclical, *Laudato Si'—On Care for Our Common Home*. In his call for an "integral ecology" that hears "both the cry of the earth and the cry of the poor", Papa Francesco mirrors his namesake from Assisi in this scientifically and ethically grounded treatise, inviting "every person living on this planet" into dialogue "about our common home" (¶ 3). Covering climate change, biodiversity loss, ocean degradation, atmospheric pollution, and social degradation, its 246 paragraphs address the "excessive anthropocentrism" handed to us as "a Promethean vision of mastery over the world, which gave the impression that the protection of nature was something that only the faint-hearted cared about." In this, he exposes the error of interpreting "dominion" (cf. Gen. 1:28) as domination, when it "should be understood more properly"—"in the sense of responsible stewardship" (¶ 116).

From antiquity to the present, there is a variously documented history that reciprocal action between earth and people generates the concept and practice of stewardship. This dynamic interaction serves to correct adverse human actions to produce a culture of care for earth as a habitable abode—a "stewardship tradition.". In his definitive treatise, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (1967), Berkeley geographer Clarence Glacken tells how ancient peoples observed and appreciated the ordered cosmos and correspondingly responded to order and sustain the earth for human habitation. These ancient ideas joined with classical ones and later fused with their expression by the early Church Fathers. With the industrial revolution the classical and ecclesiastical underpinnings of stewardship were threatened as 'unmistakable evidences that undesirable changes in nature were made by man began to accumulate in great volume..." making it seem that "the lord of creation was failing in his appointed task, that he was going a way of his own, capriciously and selfishly defiant of the will of God and of Nature's plan...'

The long-standing stewardship tradition was only faintly retrieved in the 20th century as a diminutive "stewardship of personal time, treasure, and talent," to help meet budget goals. But that is changing. "Stewardship" and "caring for creation" were emerging in the late 20th and strengthening into the 21st century in institutions of faith and science. A wide array of religious denomination implemented stewardship statements. And following an open letter from 32 Nobel laureates and other scientists, senior religious leaders "affirmed the need for theologically grounded, scientifically informed religious initiative" that led in 1993 to forming the National Religious Partnership for the Environment—an alliance of the U.S. Conference of Catholic Bishops, the National Council of Churches, the Coalition on the Environment and Jewish Life, and the Evangelical Environmental Network (EEN)—building upon "the religious beliefs and

moral values of each of the bodies which make it up and which will independently undertake its own initiatives in its own community." "An Urgent Call to Action: Scientists and Evangelicals Unite to Protect Creation" was written by 28 scientists and evangelicals, organized by NAE's Richard Cizik, and Harvard's Eric Chivian and E. O. Wilson—released at the National Press Club January 17, 2007. In 2015, "Earth Stewardship: An Initiative by the Ecological Society of America to Foster Engagement to Sustain Planet Earth" by Chapin, Pickett Power, Collins, Baron, Inouye and Turner says that the ESA "has responded to the growing commitment among ecologists to make their science relevant to society through a series of concerted efforts, including the Sustainable Biosphere Initiative (1991), scientific assessment of ecosystem management (1996), ESA's vision for the future (2003), Rapid Response Teams that respond to environmental crises (2005), and the Earth Stewardship Initiative (2009)." And, "The goal of the Earth Stewardship Initiative is to raise awareness and to explore ways for ecologists and other scientists to contribute more effectively to the sustainability of our planet."

Among evangelical contributions to this rediscovery and renewal of the stewardship tradition was the book, Earthkeeping —produced by scholars assembled at Calvin College for a year-long project—published with subtitles: Christian Stewardship of Natural Resources (1980), and Stewardship of Creation (1991). Another was my book Earthwise (1994, 2007, 2011). Alongside these, evangelicals developed Au Sable Institute (1979)—a partnership among 80 evangelical colleges and universities on environmental stewardship education and research—and its offspring, Pacific Rim Institute for Environmental Stewardship (1999). Au Sable organized numerous "Au Sable Forums" on stewardship that researched and published books on the science, ethics, and praxis of stewardship. It also produced the Oxford Declaration on Global Warming (2002) in partnership with its sister organization in the U.K. the John Ray Initiative. And it contributed to the Evangelical Declaration on the Care of Creation (1994) and The Sandy Cove Covenant and Invitation (2004). These in turn spurred stewardship action by the National Association of Evangelicals, including Loving the Least of These: Adressing a Changing *Environment.* And in 2012 this body of work over three decades provided a base for the Creation Stewardship Task Force Report (2012)—a comprehensive evangelical document commissioned by the Christian Reformed Church in North America (CRCNA). Perhaps the most important discovery over these years of research comes from the evangelical habit of taking the Judeo-Christian scriptures seriously and in so doing also (re)discovering what is coming to be called "the Stewardship Commission."

But is "stewardship" the right concept to be revitalized and strengthened in our day? Is it too religious? too anthropocentric? too static? Such questions were the focus of a consultation at Windsor Castle, September 15-17, 2000 organized by the John Ray Initiative (JRI). Recognizing that "Establishing a proper relationship between humanity and its environment has become an urgent practical matter now that we recognize our actions are having damaging and perhaps disastrous effects" this consultation sought "to explore the value and robustness of stewardship as a theological, philosophical, scientific and pragmatic concept and to examine other possible models." And it investigated the traditional roots of stewardship, its biblical treatment, and "implications from scientific perspectives" in order "to enquire whether these provide an

adequate description for general use in the secular as well as religious context."

The Windsor consultation, administered by IPCC atmospheric physicist Sir John T. Houghton and geneticist and evolutionary biologist, Prof. R. J. "Sam" Berry of University College London—both practicing evangelicals—commissioned four papers from philosopher Robin Attfield, University of Cardiff (Wales); theologian Murray Ray, King's College London; environmental scientist and ecologist Calvin DeWitt, University of Wisconsin-Madison; and 'biogeochemist' and 'Gaia hypothesis' scientist, James Lovelock. The papers and conclusions were published in *Environmental Stewardship: Critical Perspectives—Past and Present.* a book that included the revised four papers "alongside some of the classical statements about stewardship, plus a number of contributions written especially for this collection." My revised paper benefitted from the discussions, including Lovelock's criticism of stewardship as being too static, shaping my concluding definition as:

"Stewardship is environmentally responsible behavior that involves an interactive relationship of human beings with their dynamic environment. Stewardship integrates science, ethics, and praxis; recognizes a dynamic and changing Earth, maintains biospheric systems that are working well; works to restore degraded systems to previous levels of performance; compensates for altered systems and system behavior to restore sustainability; tests the responses of systems by experiment and praxis, applies the results in the direction of system sustainability, and learns from others' experiential behavior. Overall, stewardship shapes and reshapes human behavior in the direction of maintaining individual, community, and biospheric sustainability. It is practiced in behalf of future generations, in behalf of the biosphere and its component systems, in behalf of the processes and persons that sustain the biosphere, and [for "people of faith"] in behalf of their Creator."

What this definition does for the concept of stewardship is to regard it robustly, as a "realm of stewardship" or more succinctly as a "culture of stewardship." It is a realm that is not well-represented by a single word even as "stewardship" is a useful identifier. And so also for *Laudato Si* in which stewardship is presented as "care for our common home" or more succinctly as a "culture of care." Explaining this without needing a theological or non-theological commitment, the encyclical illustrates across its 246 paragraphs the wide scope of this "culture of care" (¶ 231)— expressed in care for the vulnerable (¶ 10), care for all that exists (¶ 11), care of creation (¶ 14), care for safeguarding species (¶ 42), care for nature ¶ 64, ¶ 228), care for the environment (¶ 64, 229), care for neighbor (¶ 70), care for our own lives (¶ 70), care for a fragile world (¶ 78), care for the world (¶ 144, 246)), care for indigenous communities and traditions (¶ 146), care for the land (¶ 146), care for the interior of homes of the poor ¶ 148, care for our body (¶ 155), care for the ecosystem of the entire earth (¶ 167), care for our brothers and sisters (¶ 208), care for the natural environment (¶ 208), care for creation (¶ 211), care for other living beings (¶ 211), care for all creatures (¶ 213), care for ecology (¶ 225), care for the common good (¶ 225),

and care for the quality of life for the poor (\P 232).

In Laudato Si' Francis identifies "the Stewardship Commission," given in Genesis 2:15, a text that accords well with what might be called the "Stewardship Commitment" or "Stewardship Culture." This text in the words of the encyclical implies "a reciprocal relationship (relación de reciprocidad) between gardener and garden, between people and the earth." This mutually-supporting relationship recognizes on the one hand that the garden and the whole creation provide a wide array of services—including those that ecologists call "ecosystem services"—and on the other hand a wide array of services provided by the gardener. The expectation of stewardship—both in antiquity and in this biblical text—is that human beings will return the services of he garden, including its "ecosystem services." with services of their own. This reciprocal service—this "conservice"—clearly was recognized by both the ancients and the writer of this biblical text. However, when people are distanced from gardening and working with the soil for their own subsistence—and distanced from the workings of the biosphere by an increasingly fragmented and virtual world—the need for these services are no longer obvious—except for people who remain by vocation or ecological commitment in a day-to-day reciprocal caring relationship "our common home."

The master gardener knows that the garden in its flourishing and abundant fruitfulness requires the gardener's work and service, with the garden's services reciprocated with services of the gardener. For both garden and gardener this service is not a specific service, but "a realm of services" that are not reducible to a single word. To "till" for example might be one of these services, but "no-till"—its apparent antithesis—also is. So too for cultivating and resting, gathering and scattering. Beyond being a realm of service, "guardening" is a realm of protection—protection that safe-guards the garden in a realm of keeping and composting, defending and availing. All together, both realms—of serving and safeguarding—form the larger realm of stewardship. Stewardship in prebiblical antiquity, in the the biblical stewardship commission, and for today's "guardener"—is a response to a perceived, received, and retrieved call to con-serve and safe-guard the "guarden." Stewardship in our day is a realm of responses to the call to con-serve and safe-guard the world and all it contains, the biosphere and all that have their habitats within it.

And, writes Francis, "Now, faced as we are with global environmental deterioration, I wish to address every person living on this planet... In this Encyclical, I would like to enter into dialogue with all people about our common home" (¶ 3). With regard to this invitation for dialogue, the encyclical's major theme of "integral ecology" (¶s 137-162)—merits serious study by all ecologists. Of particular importance is its recognition that "the fragmentation of knowledge and the isolation of bits of information can actually become a form of ignorance, unless they are integrated into a broader vision of reality" (¶ 138). "Recognizing the reasons why a given area is polluted," for example, "requires a study of the workings of society, its economy, its behaviour patterns, and the way it

grasps reality." And this means that "We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis...(¶ 139). This in turn makes it "essential to give researchers their due role, to facilitate their interaction, and to ensure broad academic freedom" (¶ 140) and therefore we need to safeguard institutions and their effectiveness in regulating human relations (¶ 142) protecting "the cultural treasures of humanity" as part of "a living dynamic and participatory present reality" (¶ 143). Moreover, since "life and the world are dynamic realities, so our care for the world must also be flexible and dynamic. Merely technical solutions run the risk of addressing symptoms and not the more serious underlying problems" (¶ 144).

And, "Dialogue among the various sciences is likewise needed, since each can tend to become enclosed in its own language, while dialogue is also needed between the various ecological movements, among which ideological conflicts are not infrequently encountered. The gravity of the ecological crisis demands that we all look to the common good, embarking on a path of dialogue which requires patience, self-discipline and generosity, always keeping in mind that "realities are greater than ideas" (¶ 201) Francis offers to ecologists, scientists, and everyone else his conclusion for diaglogue and discussion: "Any technical solution which science claims to offer will be powerless to solve the serious problems of our world if humanity loses its compass, if we lose sight of the great motivations which make it possible for us to live in harmony, to make sacrifices and to treat others well" (¶ 200).

And so our brother Francis, with openness and grace, invites all people, no matter their belief or non-belief, to engage in a "culture of care." For the non-theist and for the earth-scholar this is the teaching of the earth as learned and taught by the master gardener—at scales ranging from garden to globe. For the theist and biblical scholar this is the teaching of the stewardship commission of Genesis 2:15, calling all to serve (*avad*) and to keep (*shamar*). For the Christ-follower this is the teaching depicted by Rembrandt in his earthy guardener masterpiece on view in Buckingham Palace: "The Risen Christ Appearing to Mary Magdalene.

As I consider how, on this 100th anniversary of the Ecological Society of America, an ecologist can contribute to a call to dialogue on "global environmental deterioration," I am guided by the Society's request to look back a century and forward to another. This is joined with encouragement by Pope Francis to address "the fragmentation of knowledge" and the question of how society "grasps reality." In seeking to respond, I find myself reflecting on J. S. Bach's "Musical Offering"—a composition of canons and fugues offered to Frederick the Great in response to a series of musical notes—the "royal theme" the king had given him earlier. Bach's musical offering inspires a parallel "ecological offering" to the ESA and to Pope Francis in response to the ecological themes they have given us, specifically: "Care for Our Common Home" and "Planetary Stewardship." Looking back a century, we find two important figures presenting papers at a symposium of the American Society of Naturalists in 1913: Henry C. Cowles and Lawrence J.

Henderson. Held January 2 within the week-long Cleveland Convocation Meeting with the AAAS and other scientific societies, this symposium on "Adaptation" included their papers, "The Adaptation Viewpoint in Ecology," and "The Fitness of the Environment; an Inquiry into the Biological Importance of the Properties of Matter."

On December 30, 1914 Cowles assembled 22 ecologists who formed an organizing committee to create a professional society, and on December 28, 1915 55 ecologists were convened to form the ESA—an event described by Frank Egerton (2015) in his "A Centennial History of the Ecological Society of America." As Cowles and his colleagues brought together ecologists to help develop ecology as an integrative discipline, Harvard biochemist and physiologist Henderson bracketed ecology on the one hand, with research and insights into the fitness of carbon dioxide and water and their constituent elements, and on the other hand, the integration of the natural science. For the former he would publish in 1913 a book by the same title, describing how that these five substances are simultaneously (1) vital for life's physiological and biochemical regulation; and (2) essential to Earth's environmental and meteorological regulation—automatic regulations both of the *internal* and *external* environment of living beings—that are absolutely essential to all life even as all five of these pre-exist life on Earth.. For the latter, he would found the History of Science Society with George Sarton 11 years later, a colleague with whom he taught the first of a two-semester course in the history of science course at Harvard. This was for founding form a discipline designed to integrate across the histories of the various natural sciences, thereby to advance "a deeper understanding of science, of nature, of life"—a discipline that would "humanize" science such that it could broadly serve the humanities and human culture.

And now, a century later—on June 18, 2015—enters our third figure whose encyclical invites ecologists, and indeed "every person living on this planet" to envision and support and "integral ecology" and to enter into dialogue "about our common home"—our common *oikos*. And, while the expectation of George Sarton and Lawrence Henderson has been turned on its head—suggested in the title of a paper by the winner of the 2014 Sarton Medal, Harvard professor Steven Shapin: "Hyperprofessionalism and the Crisis of Readership in the History of Science"—the expectations of Henry Cowles, and his colleagues habe been more than fulfilled, even as it broadens in scope to the benefit of science and society. I conclude with an "offering" for the dialogue to which Francis invites us. Like Bach's offering to the king, the "oikoumene diagram" I have sketched below is an incomplete score—to be completed by the reader and thinker.

