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An Earth Restored: Natural Capital, Deep Ecology, and the Commons

The Dialogue Continues

David Ciscel, Sandra Lewis, and Judy Lumb

How can you buy or sell the sky, the warmth of the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them? This we know; the Earth does not belong to man; man belongs to the Earth. This we know. All things are connected like the blood which unites one family.
—Chief Seattle, circa 1854

Creating Value in Earth Restored: The Commons and Natural Capital

David Ciscel

The necessity of creating the reality of Earth restored is clearly on the political agenda. Every nation serious about its public image now vies to explain how it will bring about a “greener” world. But getting there is another question. Most everyday expressions of “greenness” are so small as to be almost inconsequential. Most large projects aimed at reducing or eliminating greenhouse gases are resisted by corporate powers or national interests. The likelihood of success, given the immediacy of IPCC projections, seems at present to be small. Nevertheless, the debate of the best path to an Earth restored is a relevant and important one. How do we capture the public spirit of our current ecological crisis? Once captured, do we have a path that really creates a resilient Earth?

While there are many issues to be addressed, clearly an important one is the economy and its role in Earth restored. The success of market economies in producing and delivering goods is the clear source of the current crisis. In the process of production and consumption, the economies of the globe clearly consume too much energy, too much water, and are transforming the climate we live in.

The economic choices to an Earth restored can be reflected as two paths, paths that often cross and are probably intertwined, but paths that are conceptually and philosophically different. One is the natural capital solution. The other is the commons solution. We stand at the entrance to either path. But will we consciously choose which path will be taken?

Earth has been consumed by the economy, that is, we have just used it up. People, but more importantly, people with money-driven production and consumption-trading economies now exist everywhere on the surface of Earth. No longer can you really sit back and say this part of Earth is isolated or free of the human economy’s touch. Earth is full of economy. But the economy is, in actuality, just a subset of Earth.

It did not used to be that way. Certainly, Earth’s climate was not always in balance. The variations were wide and extreme, but

the timeframe of change was in the thousands or tens of thousands of years, which gave the ecosystems of Earth time to adjust, so they were resilient. But the anthropocentric nature of the industrial economy has brought changes so quickly that it will destroy that resiliency if we maintain current practices.

Eco-footprint analysis shows the problem in graphic detail (Redefining Progress <footprint.org>). As the economy is currently organized, it takes about 58 acres to support each person on Earth, but we only have about 39 acres per person. That is, it takes 1.5 Earths to continue running the current economy. My two-person household requires 186 acres, the equivalent of 4.8 Earths if everyone lived like I do. Clearly something needs to change. And, the projections on climate change indicate that the changes should come soon. But what is the right way to go? The conclusion is probably that any direction makes more sense than the current direction.

The natural capital solution accepts the fact that the whole Earth is full of the economy. Assuming it is far too late to allow for an Earth restored, the solution is to internalize the rest of Earth to the economy. This involves calling the air, the water, our natural resources and the natural ecosystems what they already are: “capital.” These natural systems add to the productivity of factories, transportation grids, communications and housing conglomerations. But they are not paid for their productivity. There is no depreciation to account for the draw down of water aquifers. There are no yearly audits for our ecosystems. And there are no engineers and managers running sustainable water, air or even natural resources corporations.

Not only are these natural resources not managed for sustainability, they are just plain “free” for the taking. Until recently, if the air was dirty, you could move northwest of the factories. If the water gave out, you could drill a deeper well. If the resources were harder to get, you could bring more massive technologies to bear on their extraction. But while these were individual solutions to each problem, the systemic risk of all the economic activities on Earth was largely ignored.

If users of air, water and resources had to pay for the sustainability of their use, then many activities would cease altogether while others would become vastly more expensive as the

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The vision of **Quaker Earthcare Witness (QEW)** includes integrating into the beliefs and practices of the Society of Friends the Truths that God's Creation is to be held in reverence in its own right, and that human aspirations for peace and justice depend upon restoring the Earth's ecological integrity. As a member organization of Friends Committee on National Legislation, QEW seeks to strengthen Friends' support for FCNL's witness in Washington DC for peace, justice, and an Earth restored.

QEB's purpose is to advance Friends' witness on public and institutional policies that affect the Earth's capacity to support life. QEB articles aim to inform Friends about public and corporate policies that have an impact on society's relationship to Earth, and to provide analysis and critique of societal trends and institutions that threaten the health of the planet.

Friends are invited to contact us about writing an article for **QEB**. Submissions are subject to editing and should:

- Explain why the issue is a Friends' concern.
- Provide accurate, documented background information that reflects the complexity of the issue and is respectful toward other points of view.
- Relate the issue to legislation or corporate policy.
- List what Friends can do.
- Provide references and sources for additional information.

QEB Coordinator: Keith Helmuth

QEB Editorial Team: Judy Lumb, Sandra Lewis, Barbara Day

To receive **QEB**:

Email: info@quakerearthcare.org

Website: QuakerEarthcare.org

Mail: write to address below

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Quaker Earthcare Witness
173-B N Prospect Street
Burlington VT 05401

true natural capital costs became incorporated in the selling price of various products. The practical solution for implementing a strategy of natural capital is usually argued between the carbon tax adherents versus the cap and trade adherents. Both, in one way or another, attempt to create a market in elements of the natural capital. The carbon tax system requires more administrative pricing decisions. The cap and trade system requires more regulatory oversight to reduce fraudulent transactions in carbon. But both systems use the economy to solve Earth's problems. Moneys are collected to finance renewal, prices are inflated to restrict polluting forms of production and consumption, and greener forms of consumption are encouraged by restructuring the incentives of the market system. This results in a regulated market Earth, a market-managed system of ecosystems.

The problem with the natural capital solution is that there really is no Earth restored, just more economy. The commons model argues for a return to a "real" Earth. Isn't it time to untangle parts of Earth from the economy? Basically, this is the national park system for saving natural ecosystems. It is just not possible to turn the air, water and other natural resources into the equivalents of private property or financial capital. It is time to restrict Earth for renewal and regeneration, both for humans and for the multitude of other beings that live on Earth.

The commons are parts of the natural system held in common and managed for the well-being of all. The commons represents those resources or parts of Earth that are open to all for access. But, of course, there must be limits on the behavior of any one species in the commons. Creating these limits is not an easy process. When successful, managed commons allow for long-term sustainability without the constraints of markets, private property and the ubiquitous price for every activity. Even common entities like the national parks in the U.S. have had regular inroads by commercial activities. In hindsight these commons may not be regulated for a sustainable future, but they have been small, successful, refuges from the imperial behavior of the marketplace. Not all the management of the commons has resulted in the predatory behaviors like that of the fish in the open seas. Over the past century, some of the effects of the industrial revolution have been addressed. The air has been cleared of some forms of particulate matter; reduction of acidic effluents has allowed some restoration of lakes and rivers so fish can live, and with protection some wild creatures have returned to our woodlands. These are all success stories for a managed commons. More of Earth needs to be set aside, managed, and used in clearly sustainable ways. While an ecological set of commons would require some management and considerable protection, the need for complex financial instruments is eliminated. No capital is needed as the economy steps out of the way; Earth is allowed to manage itself.

One of the real problems of the last two centuries has been that not only has the industrial, energy consuming revolution occurred, but population has expanded to the point where large populations of humans now inhabit places where there were few or no humans in the past. It is not clear that we still have the option of setting aside watersheds, forest, wetlands, and other ecosystems in the quantity necessary for Earth to become naturally sustainable.

The argument for a vast expansion of the commons recognizes that humans may not be wise enough to run the whole Earth. Plus, it returns Earth to a place that runs naturally. Or does it? With the current population and the current dispersion of humans, isn't it just too late for this "back to nature" approach to be even slightly realistic?

The natural capital method has the advantage of creating pricing incentives to restrict the use of coal, oil and gas, thus limiting the input of more greenhouse gases into the climate system. To work, it requires rules, institutions, and regulatory structures, but most importantly, prices. The prices make it too expensive to use things in large quantities. The commons method returns Earth to its natural processes,

with managerial oversight and protection as the two issues that must be resolved for success. To work, it requires non-interference.

So the issue becomes which strategy works and works quickly enough to turn around the current downward trends in Earth viability. It is difficult to predict. One or the other may be more attractive philosophically, but in the current social and political environment, the distinctions seem to fade in the overwhelming opposition to either approach. Either approach, creating a commons or creating natural capital, takes resources that are currently used for “free” and makes them unavailable or costly.

If the costs of climate change increase dramatically in temperate regions of Earth—crop failures, large population die-offs, or water shortages—the two approaches will become more relevant. It may not be necessary to make a choice because they could be complementary rather than competitive. Each area set aside as a green commons from encroachment by the industrial economy will benefit Earth. Each carbon tax or traded carbon allotment will help re-allocate economic production and spending in a greener direction.

Quakers may have an important role to play in an Earth restored. Historically, we have been innovators in the very economy that got us into this fix. Whether it was commercial farming, banking, retail trade, or even manufacturing, early Quakers were often leaders in transforming Earth into an industrial place. Just as the Religious Society of Friends led the way in industrial social practices, it is time for individual Quakers to help lead the way in ecological practices. Quaker merchants understood that prices were important; they reflected the value we placed on a product. In a time when prices varied widely depending upon who the buyer was, Quakers felt that one price should be available to everyone who came to the marketplace. Similarly, when we price greenhouse gases to drive down carbon usage, the prices need to reflect our respect for Earth and the other creatures. Some things just shouldn't be priced. Education must prepare everyone so that the lack of a price doesn't mean that everyone has the right to use or despoil that part of Earth.

Starting from where we are today, an Earth restored requires more commons and more natural capital. But more importantly, it requires a populace that understands that Earthcare requires a respect for the integrity of all of God's creation.

A Deep Ecology Perspective

Sandra Lewis

Without the gifts of nature that sustain us—sun, water, air, soil, plants, animals and Earth cycles and processes that keep them going—there would be no life, no “goods,” no human economy. To relate to these gifts of nature as “commodities” whose primary function is to create “wealth” for humans is a fundamental flaw of modern, industrial capitalism. This flaw is amplified by demands that such wealth accumulation occur by maximizing economic growth and efficiency at all levels of the human economic enterprise no matter what the costs to the natural world.

In contrast, a deep ecology perspective calls us to remember with reverence and gratitude that nature's gifts, functioning as a whole, make life on Earth possible for us and all other species. From this perspective we have no “right” to create “wealth” for ourselves from these gifts if, in so doing, we make access to them impossible for other humans or other species. Rather we have a “responsibility” to “care” for these gifts and to help ensure their continued availability and vitality for future generations.

We now face two enormous challenges: (1) stopping the impacts of the human economic enterprise that are destroying Earth's life support systems, and (2) creating new social, political, and economic institutions that support rather than undermine the capacity of Earth to provide these essential gifts of life.

These challenges pose difficult choices about how to proceed, but let's be clear, the choices we make will reflect assumptions about how things are or should be on this planet, assumptions about the “right” place of humans within planetary life. Are we humans stewards? kin? masters? co-evolutionists? Our choices reflect on the nature of humans. Are we humans self-interested? empathic? independent? interdependent? cooperative? competitive? rational? irrational? What are the values and ethics that should guide human behavior, particularly economic behavior? An ecological world view requires radically rethinking our assumptions and making changes that reflect a mature understanding of our place in the commonwealth of life on Earth.

A deep ecology perspective calls us to look to nature for guidance in creating new social, political, or economic arrangements. For example, how can we draw on the science of living systems and evolution to help us design economic and social systems that incorporate our knowledge of how ecosystems thrive and change in nature? To what extent do our human economic and social arrangements acknowledge the reality that we are all connected and dependent on each other and on the larger web of life for our health and well-being? What can we learn about optimizing the flows of human energy and its products from the dynamics of the flows of energy and matter on the planet, the shifting balance between entropy and the creation of order? In seeking technological solutions to human challenges, can we tap the vast store of research and development already done by nature through the evolutionary process to mimic solutions found in nature to solve similar problems?

Industrial capitalism was designed and developed largely without regard to such questions, and we are now caught up in a whirlwind of environmental destruction caused by this failure. Natural capitalism seeks to moderate and even reverse this destruction by using familiar tools from industrial capitalism. An example of this approach is to create a market for carbon emissions as a way to reverse the trend toward global climate change. Familiar economic concepts, such as, markets and pricing, are applied to a newly defined commodity, carbon emissions, to help stop ecological damage.

Natural capitalism leaves the basic assumptions of industrial capitalism mostly unchanged. It attempts to solve our ecological crises with the same mindset and tools that created them. While

Governing the Commons

Judy Lumb

experiments with natural capitalism go forward, the urgency of our situation calls us to question these old assumptions and devise new ways to conduct human affairs based on a different understanding of the human/Earth relationship.

One of the most promising of these innovations is the re-emergence of the commons as a vehicle for helping insure that: (1) all people have right of access to the means for life that Earth provides; (2) these life-giving gifts are used more for the common good than for private wealth accumulation; (3) they are used in a way that secures for future generations this same right of access. This idea of the commons is more far-reaching than the idea of setting aside national parks and other wilderness or scenic places for all to enjoy. It involves moving key resources essential to supporting life out of the marketplace into what Elinor Ostrom calls “common pool resources” to be governed by and for the benefit of users at local levels in an equitable and sustainable manner.

For Quakers, there is much to appreciate about this concept of the commons because it places responsibility and accountability for equitable access to common resources on those who use them in a given locale. The commons takes into account local conditions in setting rules for use and for preserving the vitality and resilience of resources under its care. “Under the care of the commons” is a phrase that, for Quakers, may evoke another phrase, “under the care of the meeting.” The assumptions, values and practices of Quakers in creating participatory, egalitarian, self-governing, caring human communities, have much to offer in shaping the commons. Quaker experience in building trust within a community and creating effective practices for conflict resolution are two fundamental attributes of successfully governing the commons.

Historically, Quakers have been most concerned with the well-being and development of humans, but we are now waking up to an imperative to extend our concern and caring to the whole community of life. This is reflected in efforts to re-interpret existing Quaker testimonies in the light of an ecological world view (*QEB* 6:4) or to incorporate these ideas into a wholly new Quaker testimony on Earthcare. These trends only amplify the relevance of Quaker experience in shaping a commons that is responsible for overseeing the care and use of Earth’s life-sustaining gifts.

In modern times, the assumptions, institutions, and practices of industrial capitalism have shaped and dominated the human/Earth relationship. Natural capitalism has the potential to use some of these institutions and practices to ameliorate the ecological and social costs of the dominant paradigm. The commons has the potential to help shape a qualitatively different human/Earth relationship and offers an alternative to conducting business as usual. A deep ecology perspective has the potential to infuse the human/Earth relationship with reverence, respect, and gratitude for Earth’s gifts and to help us live in greater harmony with how nature works. Quakers have the potential to make significant contributions to shaping a new order by sharing what we have learned from three hundred years of cultivating trust, cooperation, participation, shared decision-making and accountability within our communities.

Who will govern the commons? The phrase, “the tragedy of the commons” comes from an essay by Garrett Hardin in which he considered only two options, government-imposed regulations or private ownership, and chose the latter. But there are other options (*Science* 280: 682). The 2009 Nobel Prize in Economics recognizes the work of Elinor Ostrom in the governance of the commons. For over four decades she and her colleagues have amassed countless studies of successful and unsuccessful cases of governance and developed a theory and practice for governance of the commons by self-governing public enterprises.

In her 1990 book, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York NY: Cambridge University Press), Ostrom describes successful and failed self-governing institutions for management of the commons, as well as attempts to change existing institutions. She begins with the successful “long-enduring” institutions, high-mountain grazing and forest lands in Switzerland and Japan, as well as irrigation societies in Spain and the Philippines. The first written rules for the use of the commonly owned mountain slopes for summer grazing of cattle and use of timber in Töbel, Switzerland, were dated in the year 1224 and there is a document which the residents signed in 1483. These agreements have persisted through the generations ever since.

In Valencia, Spain, rules for distribution of water for irrigation were developed before 1238 and written at a meeting in 1435 when 84 residents met and approved regulations covering who had rights to the water, how it would be shared in good years and bad, how the canals would be maintained, how they would elect officials, and how they would enforce the regulations with fines. For over 500 years farmers have met, elected officials, and revised the rules when necessary.

From these and many other case studies, Ostrom and her colleagues developed eight “design principles” for successful self-governing organizations for management of the commons:

- 1) Clearly defined boundaries,
- 2) Congruence between the local conditions and the rules,
- 3) Participation of those most affected,
- 4) Monitoring by the appropriators or accountable to them,
- 5) Graduated sanctions and punishments,
- 6) Rapid access to low-cost conflict resolution services;
- 7) Right to organize is not challenged by the government; and
- 8) Nested enterprises for commons in larger systems.

In her Nobel Prize Lecture, Ostrom emphasized the importance of trust in the development and maintenance of institutions for governance of the commons. She explained that successful management of resources often requires a complex arrangement of governing organizations. She urged us not to be afraid of complexity, saying, “Complexity is not the same as chaos.”

Whether a local resource managed by a community group or a complex system for limiting and governing human use of the oceans, the work of Ostrom’s group has paved the way.

We invite our readers to participate in this continuing dialogue. Send comments to <judy@btl.net>