

# QUAKER ECO-BULLETIN

*Information and Action Addressing Public Policy  
for an Ecologically Sustainable World*

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## An Economics For Spaceship Earth

*A time for witness—A time for service*

Peter G. Brown

*...I am tempted to call the open economy the “cowboy economy,” the cowboy being symbolic of the illimitable plains and also associated with reckless, exploitative, romantic, and violent behavior... The closed economy of the future might similarly be called the “spaceman” economy, in which the earth has become a single spaceship, without unlimited reservoirs of anything, ... and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot escape having inputs of energy.*

—Kenneth E. Boulding, “The Economics of the Coming Spaceship Earth,” 1966.

Kenneth Boulding was a prominent economist who taught at the Universities of Michigan and Colorado and was a member of the Society of Friends. Although his challenge was presented nearly forty years ago, the economics profession continues to marginalize those who seek to adopt his perspective. In the main the public remains uninformed, and uninterested in even thinking about changes—let alone acting in a manner that would fit the economy to the biosphere. Our society continues to be dedicated to infinite economic growth within a finite ecosphere.

### The Current Economic Policy Regime

The current U. S. policy regime, the so-called “Washington Consensus,” falsely claims to be value-free while imposing an economic model on the rest of the world that is based on values specific to western technology, ideology, and culture. This model is built on assumptions that are rarely acknowledged and fundamentally indefensible. The result is ecological destruction, social injustice, and radical, systematic deprivation of opportunity. Governments around the world attempt to stimulate economic growth through fiscal and monetary policy, free trade, and decreased roles for government with little or no regard for the ecological and societal consequences of these policies. Worse still, its principal architect, the United States, systematically disregards the very agreements (such as reducing agricultural subsidies) that it often foists on other nations—contributing still more to poverty and ecological destruction, not to mention breach of trust.

An economics of stewardship is needed now—an economics dedicated to preserving and enhancing the commonwealth of life with which we share this planet. The success of the current policy regime in providing economic prosperity and social mobility for some is undermining the prospects for social stability and economic prosperity for many others, as well as destabilizing the climate and weakening the resilience of ecosystems around the world.

### Questions an Economic System Must Address

Because the Washington Consensus is based on flawed assumptions, it cannot offer satisfactory answers to five basic questions.

#### 1) What is the economy for?

In virtually every nation, the government aims at economic growth with high levels of employment and low inflation. But the growth element of this objective is incoherent for many reasons, including:

- Growth is not a measure of benefits, but a measure of overall economic activity. That we have more of it means only that we have more of it—not that we are better off. Much economic growth creates negative side effects like pollution, but current measures don’t take this into account. Indeed, the money we spend to protect ourselves from pollution creates more growth—and hence appears as a benefit.
- Incomes can rise while wealth in natural resources falls. If we cut trees, income can rise during the cutting, but the ability to sustain it falls after the trees are gone. This has especially tragic implications for poor countries whose economies are heavily dependent on natural resources.
- Growth contains no measure of distribution, so poverty and inequality often can and often do rise at the same time that overall economic activity increases. This is happening today in the United States.
- After certain basic needs are met, it is one’s relative wealth—how we compare to others, not the absolute amount of wealth we have that determines much of our self perception of happiness. In “advanced” societies, trying to improve happiness through growth is a treadmill, since we cannot all be wealthier than each other.

**Quaker Eco-Bulletin** (**QEB**) is published bi-monthly as an insert in *BeFriending Creation* by Quaker Eco-Witness-National Legislation (QEWN-L), a project of Quaker Earthcare Witness (formerly FCUN).

**QEWN-L** promotes government and corporate policies to help restore and protect Earth's biological integrity. It works within and through the Religious Society of Friends for policies that enable human communities to relate in mutually enhancing ways to the ecosystems of which they are a part. This witness seeks to be guided by the Spirit and grounded in reverence for God's creation.

**QEB**'s purpose is to advance Friends' witness on government and corporate policy as it relates to the ecosystems that sustain us. Each issue is an article about timely legislative or corporate policy issues affecting our society's relationship to the earth.

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

- Provide background information that reflects the complexity of the issue and is respectful toward other points of view.
- Explain why the issue is a Friends' concern.
- Describe the positions of other faith-based and secular environmental groups on the issue.
- Relate the issue to legislation or corporate policy.
- List what Friends can do.
- Provide sources for additional information.

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## 2) How big should the economy be?

The Washington Consensus contains no measure of "enough," no means of saying when growth has become uneconomic. The current economic regime rests in significant measure on taking sunlight from the past that has been stored in fossil fuels, soils and forests, and spending it on current consumption. It shifts many of the by-products of these activities to the future, from building up carbon dioxide in the atmosphere to the dispersion of heavy metals and persistent organic pollutants.

We have not asked a simple question: how big should the economy be? As a result we continue to live beyond our means, laying waste the biosphere on which we and the rest of life depend. We completely ignore the question: how much of the earth, how much photosynthesis may humanity—just one species among millions—legitimately appropriate for itself? We have no principle of interspecies fairness.

## 3) What is a fair basis for sharing the fruits of an economy of proper scale?

As Boulding pointed out in 1975 "we have a two-deck spaceship," one for the haves and one for the have-nots. Though many have increased their level of well-being since Boulding wrote, hundreds of millions still live in absolute poverty. The Washington Consensus completely disregards the absence of equitable sharing in a model that legitimizes exploitation and structural violence. The only remedy it offers the lower decks—global poverty—is more economic growth, but endless growth runs up against the finite limits of the planet discussed above.

## 4) How does the economy work?

The current policy regime urges us to adopt free trade around the world, arguing that trade benefits all who participate in it. It is true that those who engage in an exchange typically benefit—otherwise they would not do it. As David Ricardo pointed out nearly 200 years ago, nations that trade typically benefit because they have comparative advantages. If Britain is better at producing wool and Portugal wine, then each should concentrate on what they do best and exchange the surplus, to use Ricardo's example. Prudent capitalists in Britain will invest in wool, while their Portuguese counterparts invest in wine.

This trade model works fine as long as capital and other factors of production stay in their home country. But this is no longer the case. Now capital seeks its absolute advantage anywhere on the globe. However, some countries cannot hold capital—Russia is a country that experiences significant flights of capital. Others waste their natural capital, such as forests or fisheries, in trying to have something to exchange in global markets. These countries are marginalized, their futures impoverished as their resources become depleted or devastated. For example, the conversion of coastal mangrove swamps in Central America and Asia to shrimp farms destroys the breeding grounds for the fish that are part of the traditional fishery. But if the shrimp farms fail, the land is no longer suitable for regeneration of the mangrove swamp.

Moreover, the Washington Consensus has only recently, and marginally, paid attention to the institutional context necessary for the market to work. Economic reforms are often pushed without regard for building such institutions as property, contracts, courts, an educated populace, banks and constitutional regimes on which successful markets depend. The regime ignores or under-rewards both natural and institutional capital.

## 5) How does the economy deal with waste?

"A basic *aspirational* principle of current economics is that the polluter causes harm and should pay for it, though the principle is ignored for the most part. This is akin to the idea that economists refer to as "internalizing externalities." This is not the best way to look at the problem of waste because:

- It is often difficult to calculate the monetary costs of pollution. For example, how much harm will additional carbon dioxide in the atmosphere cause by changing the monsoons in India over the next century? This is an analytically intractable question.
- This principle conflates harms with wrongs. There are some things that we want to prohibit rather than tolerate and just get compensated when they happen. It is wrong to kill or damage young children by dumping poisons in their communities.
- The “polluter-pays” principle concentrates the power of eminent domain and the protections of the judicial system in the hands of private industry: you can pollute my lungs as long as you are willing to pay for it.
- The principle in question is entirely anthropocentric; it assumes that only costs to humans matter.

### **Stewardship Economics**

An economics based on the concept of stewardship begins by shifting the point of departure from humanity at the center of the world to humanity as a member of the commonwealth of life. It takes modern science seriously—from Copernicus and Kepler to Darwin, Watson and Crick—seeing us as members of an evolving community with which we share heritage and destiny. Here is how stewardship economics would answer the five basic questions.

#### **1) What is the economy for?**

A stewardship economy would go beyond the human-centered goals of achieving social stability through high employment with low inflation, to a more encompassing goal of ensuring the health and resilience of the biosphere. It would neither

grow too large nor rely on economic practices that make it impossible to protect the biosphere.

#### **2) How big should the economy be?**

The economy is too small if it cannot supply the basic needs for housing, nutrition, basic medical care, and the like, for all its citizens, and too large when it systematically eradicates other life forms. The space in between is that of legitimate human wealth.

#### **3) What is a fair basis for sharing?**

Stewardship economics requires stewardship of persons, expressed as basic human rights to include:

- bodily integrity;
- moral, political, and religious choice;
- adequate subsistence (housing, food, basic medical care, drinkable water, clean air)

#### **4) How would the economy work?**

There is nothing in a stewardship perspective that argues against all trade, but it does put trade in another context: how could the trading regime be arranged to protect the biosphere and improve the lot of those systematically deprived of their rights? For example, we could locate farming where it would do the least ecological damage and support local populations.

There should be a presumption against moving goods long distances because of the use of fossil fuels and resulting emissions of greenhouse gases and pollutants. Trade not only destabilizes planetary systems but local ecosystems as well. Shipping large amounts of water, for instance, typically reduces life support capacity at its source. Trade in nature typically dismantles the ecosystems assembled by sunlight and photosynthesis. We need both financial and ecological balance sheets.

### **The Natural Step**

The Natural Step is a set of principles developed in Sweden and now used by businesses and other organizations around the world to make their operations more ecologically sustainable. The first of four “system conditions” in this model relates to the use of fossil fuels and other substances extracted from the Earth’s crust.

The Natural Step defines this system condition as follows:

**“Substances from the Earth’s crust must not systematically increase in the biosphere.** This means that for a society to be sustainable, the balance of flows between the ecosphere (living organisms and the physical systems with which they interact) and the lithosphere (the earth’s crust) must be such that concentrations of substances from the lithosphere do not systematically increase in the whole ecosphere, or in parts of it.

Why not? Over billions of years fossil fuels, heavy metals and minerals were sequestered into the earth’s crust and nature has adapted to specific amounts of these materials. Mining and burning fossil fuels release a wide range of

persistent substances into the ecosphere that build up and spread. Current living systems are not equipped to handle magnified amounts of lead, mercury, radioactive materials, and other hazardous compounds. Consequently, when humans support a systematic increase in the concentration of matter that is introduced into the biosphere from the lithosphere we risk destroying the functions and biodiversity of the ecosphere.

The basic science behind this reasoning follows that:

- 1) **Nothing disappears.** According to the First Law of Thermodynamics and the Principle of Matter Conservation, matter and energy cannot be created or destroyed.
- 2) **Everything spreads.** According to the Second Law of Thermodynamics, matter and energy tend to disperse. Thus, eventually, all matter introduced into society will be dispersed into natural systems.

—*The Natural Step Newsletter* (Vol. 1, # 8, Spring, 1999)  
For more information about TNS visit its web site:  
[www.naturalstep.org](http://www.naturalstep.org)

## 5) How would the economy deal with waste?

We are able to reframe the issue of waste along lines suggested by the program called the Natural Step. The goal of economic policy should not be to ensure that the polluter pays, but rather to ensure that the material from the earth's crust (e.g. carbon and arsenic) and materials produced by society (e.g. persistent organic pollutants) do not accumulate in the biosphere either systematically or, in the case of carbon, beyond equilibrium levels. The practices this program promotes are already being introduced by some businesses and industries. For example, solvents can be based on water rather than hydrocarbons and bio-fuels can be substituted for fossil fuels.

In conclusion, stewardship economics is not something dire or beyond our reach. It means revising our place in the world and taking many of the tools of the current economics—differential interest rates, ecological taxes, and pollution trading regimes, along with new and developing technologies—and putting them in the service of future life on this planet. Friends have an unusual burden that goes beyond cultivating good habits and supporting policies that appear less damaging. As George Fox showed, there are times we need tools that go beyond friendly persuasion.

**Now is a time for witness** that requires questioning the very assumptions on which our current economic system functions. The architects of the global debacle now underway brook no criticism, mainly control the mass media, and are embedded in a world of institutional corruption—often beyond even their own ken. In the affluent nations, the public is largely uninformed and uninterested in the issues. How can the needed conversation be opened, even compelled, within the constraints of non-violence?

**Now is a time for service.** We are called upon to offer a vision of a civilization worthy of respect. Yet such a conception of the future remains inchoate in the main. Concerned Friends can commit themselves, both individually and corporately, to learn more about the foundation of modern economics. We can then go forward, trusting that ways will open, to contribute to

essential change in our economic policies and institutions. If a crisis—intentional or otherwise—occurs, we miss our most fundamental calling if we are not ready to help guide our economic systems toward a future of peace, justice, and an earth with its ecological resilience restored.

Kenneth E. Boulding was a vocal, yet exceptionally rare, critic of mainstream economics. He offered both witness and service. The economics profession offers few others like him. Are there resources within the Society to live up to his legacy? Can we provide witness and service on behalf of spaceship earth?

### For Further Information

- Kenneth Boulding, 1966. "Earth as a Spaceship" <<http://csf.colorado.edu/boulding/>>
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- Herman E. Daly, 1996 *Beyond Growth: The Economics of Sustainable Development*, Boston: Beacon Press.
- Wackernagel, M., et al. Tracking the Ecological Overshoot of the Human Economy. *Proc. Natl. Acad. Sci. USA*, **99** (14): 9266-9271, July 9, 2002. <[www.pnas.org](http://www.pnas.org)>

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### What Can Friends Do?

Two projects have grown from a Gathering of Friends on Economics and Ecology held Pendle Hill in June, 2003.

**Friends Testimonies and Economics** is a project of Quaker Earthcare Witness and the Earthcare Working Group of Philadelphia Yearly Meeting. Its purpose is to advance a clearer understanding about economics in an ecological context among Friends in the United States and Canada. A new curriculum, Quaker Eco-101 (referring both to economics and ecology) is being prepared to serve as an interactive study guide and resource. It will be available next September for use by churches, monthly meetings, and other groups throughout the Religious Society of Friends.

**Quaker Institute for the Future** is an independent project of a group of academics and policy professionals, recently incorporated and in its formative stages. They believe that the distinctive perspectives of Friends provide openings to advance decision-making for the common good and to enhance values essential to the health of society. They see a need to strengthen the public policy witness of Friends and other faith communities with both understanding of the current economic and ecological systems and analysis for strategic intervention. The Quaker Institute for the Future will serve as a catalyst in meeting this need.

To receive more information about these two projects contact QEW-NL Communications Coordinator Sue Nelson at (216) 221-1162 <[QEW-NL@QuakerEarthcare.org](mailto:QEW-NL@QuakerEarthcare.org)>