

QIF/MEP Symposium – May 15-16, 2009 – Introduction

Geoffrey Garver

When the total appropriation of Earth's life support capacity (net primary productivity) by humans and other living beings exceeds the amount available, the Earth runs an ecological deficit. This is the current situation on Earth. Human economic development is, for the first time, colliding with global ecological limits, resulting in global warming, rapid loss of species and habitats, acidification of the oceans, loss of fisheries, diminishing freshwater, and more, along with human distress and social destabilization. This situation calls for new regulatory means for maintaining economic development within the Earth's ecological limits.

Science-based means for assessing human appropriation of the Earth's ecological capacity are emerging, such as ecological footprint. Measures of human appropriation of the Earth's life support capacity provide a potential basis for developing a cap-based regulatory system for use of the Earth's ecological capacity, similar to global regulatory mechanisms posited for addressing global warming. Just as climate science is yielding information on limits on atmospheric levels of greenhouse gases that must be met to sustain human societies and other life systems, scientific research is yielding information on the maximum total human appropriation of life support capacity at which an adequate ecological capacity to support human societies and other life systems can be maintained. These maxima for greenhouse gases and total ecological impact provide the basis for establishing the cap in a cap-based regulatory system, such as a cap-and-trade system.

Implementation of a cap-based regulatory system using measures of human appropriation of ecological capacity could take several forms. This paper highlights two. The first, analogous to a global regulatory system for greenhouse gases, would be to establish and enforce a fair international distribution of the total available ecological capacity using a cap-and-trade approach. The second would target international trade, using a modification of the International Clearing Union proposed by John Maynard Keynes in the Bretton Woods talks. This proposal involved adjusting an international trade currency, called the *bancor*, against national currencies so as to prevent both trade surpluses and trade deficits of individual nations from exceeding established limits. *Right Relationship: Building a Whole Earth Economy* proposes a modification of the *bancor* called the *ecor*. The *ecor* would be established to reflect a global cap on appropriation of ecological capacity (e.g., ecological footprint), and adjusted against national ecological accounts, rather than monetary accounts. Its main purpose would be to prevent countries from running ecological deficits, consistent with the view that maximizing domestic production for internal markets, with international trade as a backstop, is ecologically preferable.

Developing a regulatory mechanism based on ecological footprint or other similar measures would raise important questions that fall into two basic categories. First, what indicators of ecological decline are suitable for use in such a regulatory system? Second, what regulatory structures and mechanisms would be most promising for addressing anthropogenic degradation of the ecosphere?

1) *The problem of the indicators*

An initial set of questions surrounds criticisms of ecological footprint as both underestimating (for example, insufficient consideration of toxicity of pollutants) and overestimating (for example, the footprint attributable to productive land needed to compensate for greenhouse gas emissions) impact. However, ecological footprint is but one in a range of possible measures of the use of ecological capacity. For example, a May 2008 European Commission report entitled *Potential of the Ecological Footprint for monitoring environmental impacts from natural resource use* (EC 2008) recommended use of four related resource indicators: Ecological Footprint (EF), Environmentally-weighted Material Consumption (EMC), Human Appropriation of Net Primary Production (HANPP) and Land and Ecosystem Accounts (LEAC). The status of ecological footprint and other measures of human appropriation of ecological capacity must be assessed, and proposals explored for addressing shortcomings such as the overestimation and underestimate of impact in ecological footprint calculations.

2) *The problem of appropriate regulatory structures and mechanisms*

Analytical capacity. A system to regulate total human ecological impact would have significant data and research demands. In *Right Relationship: Building a Whole Earth Economy*, we propose a Global Reserve as an institutional mechanism for gathering and analyzing information necessary for allocating, distributing and stabilizing shares of access to the Earth's limited ecological capacity, using *ecors* or some other means. The concept of a Global Reserve warrants further development.

Regulatory challenges in applying ecological impact indicators. Use of measures of total human ecological impact poses several significant regulatory challenges. For example, the time lag involved in gathering information relevant to ecological footprint and other similar measures has implications for its suitability to regulatory applications. Thus, ecological footprint is often described as primarily an accounting and planning tool, suitable for use in long-range planning and as an alternative or supplement to societal indicators such as GDP. As well, analysis is needed on whether a readily-measurable surrogate, like CO₂ in the case of climate change, can be developed for a regulatory system based on total human ecological impact. Additional lessons can be gleaned from studying more conventional examples, such as the Total Maximum Daily Load program under the U.S. Clean Water Act. Questions also would have to be addressed regarding treatment in a regulatory scheme of the uncertainty involved in measuring human use of ecological capacity.

Distinguishing aggregate and per capita impact. Another series of questions involves an assessment of whether and how consideration of per-capita ecological impact measurements, in addition to or as an alternative to total national ecological accounts, should be included in regulatory systems. A country like Canada, for example, is by some measures considered an ecological creditor, because its total productive acreage using ecological footprint methodology exceeds the total ecological footprint of Canadians. However, Canada's per capita ecological footprint is among the highest in the world. An assessment is needed of whether the goals of a cap-based regulatory system for human appropriation of ecological capacity can be met without consideration of per-capita impact.

Integrating global restrictions into national regulatory structures. A review of options for implementing a global cap-based system based on human ecological impact at the national level is required. Several challenges to instituting new restrictions consistent with a national cap on appropriation of ecological capacity could arise. How, for example, could such restrictions be imposed in a country built on strong private property rights, such as the United States? This set of questions can be examined by assessing the possibilities for regulating with respect to key variables, derived from Paul Ehrlich and John Holdren's $I=f(PAT)$ formula, that effect human ecological impact: population, technology, affluence and (a post-Ehrlich-and-Holdren addition) ethics.

LAW AND THE RIGHT RELATIONSHIP

A. Dan Tarlock, Professor of Law, Chicago-Kent College of Law [Dtarlock@kentlaw.edu]

Environmental and natural resource laws are not well suited to promote the right relationships between individuals and nature for two fundamental reasons. First, most environmental protection laws are directed at the “other.” For example, toxic substance regulation is largely premised on the need for governments to protect individuals from involuntary exposure to dangerous pollutants generated by large manufacturer. Second, the law does not challenge the fundamental idea that individuals may determine the amount of resource consumption subject only to the modest caveat that they internalize some portion of the demonstrated social costs of consumption. The external cost minimization justification for environmental pollution and water use regulation of contemplates the possibility of some reduction in resource use as the gap between private and social cost is narrowed, but there is not much evidence that existing regulation has caused serious changes in individual consumption patterns, although some industries have modified their input requirements.

Pesticide use is a case in point. Since 1972, EPA has the power to ban the use of pesticides that pose significant, long-term public health or environmental risks. However, once a pesticide is allowed on the market, the user may apply as much as he or she wants. Continued large-scale pesticide use is one of the major reasons that non-point source pollution, much of it from agricultural run off, continues to cancel the gains from the control of point sources of pollution. But, the major problem with pesticide use is the arms race dilemma. Insects have considerable capacity to adapt to pesticide uses by developing higher tolerance levels. Thus, it takes more pesticides to achieve the same kill ratio. Since the 1950s, alternative pest control techniques, known as Integrated Pest Management, have existed but their application to major crops remains limited.

New paradigms such as the “right relationship” or “sustainable development” are radical because they seek to identify the root cause of behaviors that cause environmental damage and to change them. They point to new governance regimes based on three core ethical ideas: (1) the acceptance of limitations on the exploitation and consumption of many resources, (2) the recognition that present generations owe conservation duties to future generations and (3) the necessity to integrate these duties into individual as well as public choices.

Law can contribute to this project in three basic ways. First, it can force compliance with new ethical norms even when individuals refuse to internalize them. Human rights and toxic risk law proceeds from this premise. Second, it can provide mechanisms to expose noncompliance and shame people into compliance. Human rights law also relies on this strategy. Third, it can use economic incentives perform two functions: (1) the “right” pricing of goods to reflect the full cost of consumption and (2) the establishment of markets which allow individuals to purchase the right not to consume a resource.

Global Governance and Values Shift

Leonard Joy

Note: This is not a review of the book. It is a response to questions that the book gives rise to and, specifically, to the question posed:

Q: How to move to action to address the environmental challenge and the economic/social shifts it requires?

In response to this question, I discuss two related themes that I find central to the book's concerns: the creation of a global policy management system; the need for a shift in values and the behaviors that they give expression to—by individuals, corporations, and governments.

A global policy management system

Policy management systems for responding to global warming and its consequences are required at global and national levels. The more than twenty specialized agencies of the UN System, its fifteen organizations and programmes, its several regional and other commissions and multiple other entities, do not constitute a management system. Yet almost all of them have potential roles in such a system were it to be created. In principle, there are two loci for the coordination of agencies: the Economic and Social Council (ECOSOC), interacting with the governing bodies of organizations of the system, and the United Nations System Chief Executives Board for Coordination (CEB). But the key words here are “interacting” and “coordination”. The agencies may indeed interact, and they negotiate who should be doing (or not doing) what, but they do not constitute a management system.

When I speak of a policy management system, I have in mind a system in which responsibilities are allocated for monitoring the state and trends in the condition of the system of concern, in which agencies are required to respond to the indicators so monitored with prepared programmes that are agreed, funded and equipped—materially and competently—with oversight and accountability for performance. It is a signal-response system.

At the global level, the functions required of elements of a system for managing policy development and implementation are largely provided for. For example, we have the International Panel on Climate Change (IPCC) and a range of other specialized entities with the capacity to gather and analyze data on the state of the natural environment. Similarly there are key UN and supporting entities—national and corporate—monitoring financial, economic, and social status and trends. Without question existing capacities may need strengthening and augmenting. What is critically missing, however, is the linking of these elements into a global management system linked in turn to national policy management systems. As the book points out, the IPCC “has not been linked to a reliable mechanism for building enforceable international rules that will respond to the information it is producing.” Neither are any of the other myriad UN entities so linked. Yet it is evident that such bodies as, to name but a few, WHO, FAO, ILO, UNICEF, UNDP, OHCHR, IMF and the World Bank group, not to mention the GEF and UNEP¹, will all be faced with challenges that they will be responding to as global warming proceeds. While ECOSOC will make recommendations for action, and the CEB will attempt to avoid duplication of effort, this will not amount to the development of an agreed strategy and action plan in which

¹ WHO: World Health Organization; FAO: Food and Agricultural Organization; ILO: International Labour Organization; UNICEF: United Nations Children's Fund; UNDP: United Nations Development Programme; OHCHR: Office of the High Commissioner for Human Rights; IMF: International Monetary Fund; GEF: Global Environmental Facility; UNEP: United Nations Environmental Programme.

agencies are required to play strategic roles assigned to them and for which they are accountable. Nor will there, generally, be policy management systems at the national level responsive to local conditions and in ways coherent with a global effort. Missing—at both levels—is the authority to oversee the system, mobilize resources, and provide for learning and accountability.

Changing this situation at the global level, depends on the responsive engagement not only of the agencies but, especially, of national governments. All will need to be willing to forego a measure of sovereignty. Even if the necessary policy management systems—global and national—were created, we need a reason to believe that engagement would be more responsive than is now to be expected, since responsiveness is not uncommonly constrained by political contestation.

Thus, a key issue is to understand why agencies and governments might continue to fail to behave collaboratively to make and adhere to necessary agreements (whaling quotas; human rights conventions; national contributions to the UN...) and how to address this.

There is a lesson to be learned from the Bali conference on the extension of the Kyoto Accord and the power of public opinion. Forty thousand emails of protest led to the cave-in of Canadian and US positions. The lesson is that we need to develop constituencies of moral suasion. It means bringing together the power of the now hundreds of organizations into a focused constituency with a clearly articulated sense of behaviors that are unacceptable and the willingness to withdraw legitimacy and support from governments, corporations, and other bodies that practice them—including UN entities protective of their own perceived interests.

I see a need to promote the UN System's reflection and decision-making to meet the requirements of a global policy management system, for the creation of an oversight agency and, possibly, review of the roles of the CEB and ECOSOC. This would require a process of agreement and support for the acknowledged legitimate interests of each agency and for their contribution to the design of a management system. But, more fundamentally, it also implies agencies' willingness to be subject to higher authority. Past history is one of resistance to change by key entities. There is a need for public pressure to counter this. Above all, there is a need for public constituencies within each country to demand of their governments full engagement and commitment to a collaborative global effort to respond to global warming.

Values Shift

The book appropriately observes that the needed changes in behavior imply shifts in values—the priorities expressed in our behaviors.

What we know about values and values shift²:

The process of values shift starts with a realization. In this case, the realization we seek is a personal and official awareness, with imaginative concern, for the state and trajectory of Earth—its implications for us, our progeny, our communities, and the very future of humanity—together with the realization of the part that our own behaviors contribute to what is happening. *Awareness of discrepancy* between “how I am” and “how I want to be, or could be, or need to be,” is the first stage of values shift. We need to find ways of evoking and heightening such awareness.

We need to *support reflection* on the experience of discrepancy *already present* but somehow latent—sealed off or dissociated in ways that inhibit triggering change. Here the roles of religious bodies, and of the media—visual, spoken, and digital—are key. But they themselves need to be aware and reflective if they are to support this in their audiences.

Affirmation that it takes courage to change supports change, as does *normalizing*—seeding the idea

² In this section I draw heavily on Miller and deBaca's *Quantum Shift*.

that the new behaviours are “normal” and to be expected. These will help us to strike out in a new direction, to become a different person, organization, or government, in behavior, in relating.

Hope—belief in the capacity of the human spirit to change human behaviours—is essential. Yes we can!

Identifying and advertising *models of change* and the positive possibilities open to us offers stimulus for others to adapt and emulate.

We need to aim for a reorganization of reality perception—a new view of self in the world—understandably recognized as deeply right or true, leading to validated shifts in priorities and thus in behaviors—individually, corporately, nationally, internationally.

We need to ask: “What efforts are needed to promote this process?”³ “Who needs to experience what behavioral—values—shifts?” We need to ask what this has to say about what we need to do—personally and collectively—and, for some of us, specifically as Quakers.

Values shift and policy management: how they relate

If effective policy management systems are to be created and implemented there will need to be a powerful demand for them. This is not the sort of understanding that is readily grasped, nor does it command empathic engagement. It is heady stuff for which little feeling is evoked. And while the argument for such systems might be unassailable, it is not the sort of issue that people might readily become passionate about.⁴ Yet if, as I argue, it is key to our effective response to the global crisis, it surely demands the effort to build a credible constituency to press for it. Understanding the politics of these proposals implies understanding of who the players are and what they see themselves at risk of losing: the priorities—values—that drive their behavior and response. It requires their reflection on discrepancy, and the sorts of support itemized above. The design of how that might be done is a challenge that we now need to face.

³ The experience of Brian Hall and Values Technology (www.valuestechnology.org) in shifting organizations values is directly pertinent here.

⁴ My personal experience in creating such a system in the wake of a national crisis suggests that it can readily be done with appropriate government support.

QIF Symposium – Notes

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As a co-author I have appreciated and benefited from the multi-disciplinary approach to the writing of the book⁵. This points to an important factor in this process: the issues are too complex and multifarious to leave to one discipline, and it is important to preserve this approach and recognise the need to give people time to appreciate the different strands.

Right Relationship is very good at arguing for an alternative economic system and some of the issues in how to bring change. It did not focus so well on the ethical choices and the implications for governance. It also does not take into account the rapid deterioration of the planet. *RR* argues for global governance changes but these involve substantial reform of our national as well as global institutions. This is very unlikely to happen without catastrophic environmental and/or economic impacts and/or a major world war. Hence the world is likely to continue down the BAU path (or variations of this scenario) meaning that both mitigation and adaptation are necessary. Mitigation is mainly focussed at the international level but adaptation is a regional and local level.

Options for further action include working with and within existing institutions on short-term as well as longer term changes aimed at mitigation, and plans for adaptation. Options should also include developing models, tools and scenarios that are unlikely to be adopted in the short term, but will be needed when a political commitment for substantial change is made.

Mitigation – International and National

All efforts to use and support existing international means (eg IPCC and UNFCCC) should be made, despite the fact that no lasting solution from many of these forums can be achieved⁶. Anything that can reduce the growth in greenhouse gases will buy more time. All efforts should be made to support efforts at a national level, such as the plans of the Maldives to aim to be carbon-neutral within a decade⁷.

The major environmental impacts of the countries such as the USA, EU, China will determine significant outcomes. Unfortunately, expecting to achieve mitigation through a weak sustainability model, or adaptation through using the BAU approach, is limited. It is *walking north on a southbound train*. Trying to reform the American transport and energy sectors will be much more difficult than dealing with the tobacco industry. Despite the governance limitations of China, the EU and the USA in their democratic processes, support should be given to initiatives. Smaller countries can provide models or examples for the bigger countries and international agencies.

Constitutional and other Code Changes

In July 7, 2008, Ecuador adopted a new constitution that included a section giving Nature or Pachamama, constitutional rights⁸. Ecuador has based its constitutional reform on a rights framework. It uses the notion of respect within this rights framework. Many environmental ethicists have used the notion of intrinsic value. *RR*

⁵ Suz Moore needs acknowledgement for her support, and Peter Brown for the generous use of his facilities during the various workshops and his intellectual leadership.

⁶ See my “Talking Past Each Other: Economics, Ethics, the IPCC and the UNFCCC” (2009), *International Journal of Transdisciplinary Research*. Vol. 4, No. 1, pp 1-15. This article makes the case for the conclusion that the United Nations Framework Convention on Climate Change (UNFCCC) can never achieve its purpose: the UNFCCC’s articles and principles are not based on sustainable, economic, and ethical models that will do this.

⁷ www.guardian.co.uk/environment/2009/mar/15/maldives-president-nasheed-carbon-neutral

⁸ Community Environmental Legal Defense Fund. *Articles approved by Ecuador’s Constitutional Assembly*, April 10th, 2008. <http://www.celdf.org/Default.aspx?tabid=538>

takes Leopold's Land Ethic as the basis for the right human-Earth relationship.

Everyday discourse includes words such as "right", "ought", "duty", and "obligations". Schema describe standards or sets of rules enshrined in professional rules; organisational charters; national constitutions; policies; codes of conduct; creeds and doctrines; and cultural customs through myths, stories, and traditions. These sets of customs and rules are attempts to give system, clarity, and intellectual power to everyday moral activity and discourse, but rely on certain primary moral concepts. Schemas are to be distinguished from ethical theories: the latter identify and discuss such concepts used in schema and everyday discourse. The majority of schema are anthropocentric, and do not integrate human-Earth responsibilities with their human-human prescriptions⁹. For example, the Universal Declaration of Human Rights states that everyone has the right to life, liberty and security of person (Article 3); the right to own property (Article 17); and the right to health and well-being (Article 25). *Yet there are no ecological rights that guarantee human right to life, liberty, health or property*¹⁰.

Ethical theories and models of schema which are integrated into human-human and human-Earth responsibilities are sorely needed, both at academic and popular levels. An example of this integration is contained in *Sustainable Aotearoa New Zealand's Principles of Strong Sustainability for New Zealand: Including scenarios of what a strongly sustainable New Zealand could be like*¹¹.

Adaptation – regional and local

Adaptation will be different for different locations. New Zealand will become drier on its eastern side, and wetter on its western side, and both will become warmer. There will be more severe storms, and water will become more problematic, but in comparison we will be physically less affected than other countries. However, our current agricultural industries that supply around half of our overseas earnings will be significantly affected. Although many see New Zealand as clean and green, our agriculture is not clean. In the future, parts of New Zealand's agricultural land will be either subject to flooding and erosion, or will need to be converted to forest in order to become sustainable. The qualities of the majority of our soils prohibit conversion to other food such as wheat and rice, so our image as a food producer for the world is false. Environmental refugees will pose a major threat as Pacific Islands, parts of Australia and Indonesia suffer ecological deterioration and collapse. NZ is already receiving eco-migrants¹².

The development of country and regional scenarios that describe options for adaptation is one way of helping people plan how to cope.

Options for Action

There is yet no means of providing an International Quaker voice and vision on these matters. We need to continue efforts to do so, plus link with both other religious and secular organisations that share similar concerns. Strengths Quakers can bring to such a grouping include a heritage that commands respect because we walk the talk, an ideology with minimal conceptual baggage, non-violent protest, speaking truth to power.

⁹ My impression is that many Quaker YM statements of testimonies can be described as work in progress.

¹⁰ See my *Should the seas (and other stuff) be owned?* (forthcoming, but copies available on request).

¹¹ Available for public discussion in early May, but copies available now on request.

¹² www.timesonline.co.uk/tol/news/world/asia/article5993046.ece

The Carbon Cost of the Cup

Grace Seybold

"There are times when conservation comes close to meanness of soul. The spirit must be refreshed, as well as the body." - Diane Duane

How do we strike a responsible balance between doing the right things for the Earth and doing the things that we enjoy, when those two come into conflict?

I live in Montreal, where the watching of professional hockey is an integral part of many people's lives. There is no question that the Montreal Canadiens are a major source of entertainment, inspiration and civic pride. There is also no question that professional sports in general have a large environmental impact. So where do we draw the line between the justifiably extravagant and the wastefully excessive?

In this paper, I'm going to look at the carbon footprint of the Stanley Cup playoffs. This is more in the nature of a thought experiment than a strict scientific investigation, because I was unable to determine several factors, such as electricity use by the arenas, as my questions to NHL public relations, arena management, and so forth have gone largely unanswered. In addition, the playoffs would be impossible without the games of the regular season, which in turn would be impossible without all the games of the AHL, ECHL, and so forth, which train players for the professional level. All of this would need to be looked at in a more exhaustive study. The scope of this paper is therefore limited to the airplane flights taken by the NHL teams over the course of the playoffs.

In the playoffs, there are two conferences, East and West. Of the thirty teams in the League, sixteen teams, eight from each conference, enter the playoffs based on their ranking at the end of the regular season. Each round of the playoffs consists of a best-of-seven series of games. So in each conference, the #1-ranked team plays the #8-ranked team, #2 plays #7, etc. The four winners advance to the second round, where #1 plays #4 and #2 plays #3. The two winners play each other. The winner of this round is the winner of the conference, and then the Eastern Conference and Western Conference champions play a final best-of-seven series to determine the winner of the Stanley Cup. So, in total, there are fifteen best-of-seven series played. This means the number of games in any given playoffs is between 60 and 105. The 2008 playoffs comprised 85 games.

During each series, the home games alternate, with the first game being played in the arena of the higher-ranked team. So, for example, when Montreal played Boston in the first round of the 2008 playoffs, Montreal being the top-ranked team in the Eastern Conference and Boston being the eighth-ranked team, the first game was played in Montreal, the second in Boston, the third in Montreal and so on. Each team, along with its coach, assistant coaches, trainers, doctors, equipment manager, members of the press, and assorted others, generally flies from one city to another in a separate, chartered plane. The only exception in the 2008 playoff series was the games between the New York Rangers and the (Newark) New Jersey Devils, whose home arenas are less than 20 km apart, so they would have chartered a bus.

We will assume for the purposes of this illustration that the higher-ranked team starts out in its home city, so that only the opposing team needs to fly there, and then for each subsequent game both teams fly to the city in which the next game is held. We will also assume that each team returns to its home city at the end of the round.

The distances flown will therefore be as follows:

Round	matchup	# games	distance	# flights	total distance flown
A (East)	Montreal-Boston	7	410 km	14	5740 km
B (East)	Pittsburgh-Ottawa	4	655 km	8	5240 km
C (East)	Washington-Philadelphia	7	200 km	14	2800 km
D (East)	New Jersey-New York	5	20 km	-	-
E (West)	Detroit-Nashville	6	760 km	12	9120 km
F (West)	San Jose-Calgary	7	1650 km	14	23100 km
G (West)	Minnesota-Colorado	6	1135 km	12	13620 km

H (West)	Anaheim-Dallas	6	1965 km	12	23580 km
I (East)	Montreal-Philadelphia	5	630 km	10	6300 km
J (East)	Pittsburgh-New York	5	510 km	10	5100 km
K (West)	Detroit-Colorado	4	1845 km	8	14760 km
L (West)	San Jose-Dallas	6	2340 km	12	28080 km
M (East)	Pittsburgh-Philadelphia	5	415 km	10	4150 km
N (West)	Detroit-Dallas	6	1600 km	12	19200 km
O (Final)	Pittsburgh-Detroit	6	330 km	12	3960 km

Total flight km: 164750. That's about 4 times the distance around the world.

That's a lot of flying.

Using the Sightline Institute's calculation of 1.375 kg CO₂ per passenger-kilometer¹³ and assuming about 35 people on each flight, that gives us 7928593.75 kg, or just about 8000 metric tonnes of CO₂. Again, this is an extremely rough estimate, since long flights are more efficient overall than short ones, and factors such as the size and make of plane, flight altitude, etc. make a difference.

Healthy trees store about 2.86 metric tonnes of CO₂ per acre per year¹⁴, so it takes about 11 square kilometers of forest to absorb the amount of CO₂ generated by the Stanley Cup playoff flights by the teams. This doesn't include the electricity used to run the arenas (the playoffs are held in May and June, and some of the games are in cities like San Jose where the temperature rarely reaches the freezing point even in winter); the carbon footprint of manufacturing and shipping NHL merchandise (whose variety and profusion is truly astonishing, and includes such items as Montreal Canadiens lip gloss and a life-size inflatable Saku Koivu); the thousands of people who drive or fly to each game; or anything other than the team flights to the 85 playoff games.

The NHL regular season comprises 1230 games.

Is this justifiable? I don't know. I think even pro hockey players would admit that hockey isn't a necessity of life. It is sheer extravagance. So are pianos, the Cirque du Soleil, chocolate, swimming pools, about 95% of the internet, hothouse flowers, jet-skis, and the Stratford Festival. Obviously there are all kinds of things whose categorical elimination would reduce environmental impacts drastically, but at a certain cost to human experience. The question is, at what point does the environmental cost of keeping something outweigh the spiritual cost of losing it? It seems next to impossible to establish a strict line beyond which something is unacceptably costly regardless of its aesthetic merit. We have no accurate means of measuring joy.

In fairness, the NHL has taken steps toward more environmental hockey; the NHL Players' Association is working with the David Suzuki Foundation to purchase carbon offsets for their emissions, which come out to about 10 tonnes per player for the regular season, and about 400 players are currently participating in this voluntary program¹⁵. It's only a start, though, not a solution. With many teams located in southern American cities, arenas located hundreds of kilometers apart, and a schedule that runs from September to June, truly green professional hockey may turn out to be impossible.

This is a value decision that we have to make as a society. Hockey is an expression of beauty, spontaneous art, and the outer limits of human physical ability, and we as Canadians would be poorer without it; but the environmental damage caused by the kind of energy expenditure that the current professional hockey structure requires is making us poorer every day. We might decide it's worth it, we might not; but we need to start thinking about it, and right now we aren't.

¹³ "How Low-Carbon Can You Go", <http://www.sightline.org/maps/charts/climate-CO2byMode>. Seattle: Sightline Institute, 2008.

¹⁴ "Tree Benefits", <http://www.coloradotrees.org/benefits.htm>. Colorado: Colorado Tree Coalition, 2009.

¹⁵ "NHL Players Put Global Warming On Ice", http://www.davidsuzuki.org/Climate_Change/Projects/Hockey/. Vancouver: David Suzuki Foundation, 2009.

Presentation

by Scott Vaughan

For over two decades, the concept of sustainable development has been endorsed widely, and a variety of definitions have been articulated. At the same time, progress in translating sustainable development into clear and measurable goals and results is disappointing. Some have abandoned the concept of sustainable development because of multiple and at times contradictory definitions that allow short-term unsustainable actions to persist.

Since 1997, major departments and agencies of the government of Canada have been legally obliged to produce a sustainable development strategy every three years. A consistent finding of audits done by past Commissioners of the Environment and Sustainable Development of the Office of the Auditor General is that these strategies had become a compliance-oriented exercise and did not represent substantive plans for sustainable development. The strategies were not working to produce more sustainable development as Parliament had envisioned.

In June 2008, Parliament recognized the flaws of past practices and adopted a new law – the Federal Sustainable Development Act. For the first time, the government is obliged to set out a clear and overarching set of goals for sustainable development, and a strategy to get there. The new Act adopts the widely accepted Brundtland definition of sustainable development from Our Common Future (1987). It refers to the precautionary principle, sustainability, and ecological efficiency and explicitly acknowledges the need to integrate environmental, economic and social factors in all government decisions. This latter point is described as a basic principle of sustainable development. The central importance of setting measurable targets and identifying specific Ministers responsible for achieving them is another key element of the Act.

The draft strategy is expected to be circulated by the Minister of the Environment for comments in the coming months. The Commissioner of the Environment and Sustainable Development has certain legal responsibilities, both in commenting on the draft strategy, and monitoring its implementation. The presentation will discuss the Act and the related work of the Commissioner's office in relation to sustainable development.

Possible Questions:

Sustainable development remains an important concept that has entered all levels of public and private sector policies. Yet measurable progress in moving towards a sustainable path remains elusive. Why? Several countries, including Sweden, the UK, Denmark and Germany as well as the European Union, have adopted sustainable development objectives, targets and indicators. Does measurement of progress matter? Can Canada learn from others, and if so, what are the best ways of absorbing lessons learned examples?

What is needed to make progress in integrating economics with environmental and social considerations?

Some Reflections and Questions about the Economic Growth Dilemma

Ed Dreby

In a recent Quaker Eco-Bulletin, prior to the onset of the current economic debacle, I suggested a need to develop economic policies and perspectives that would enable our (US) economy to contract significantly while preserving prosperity, i.e., meeting basic needs and providing fulfilling opportunities for all. I suggested 12 possible steps for moving in this direction. In many ways this Eco-Bulletin summarized what I have concluded from spending the past 15 years reading Kenneth Boulding, Herman Daly, David Korten, Peter Barnes, and many others.

Soon thereafter I came across an article by Daly which proposes 10 points for beginning to reduce the scale of our economy. More recently, Korten has proposed a 12 point agenda for a new economy. There are undoubtedly many other suggestions being made like this. Most that I have seen either focus primarily on what an ecologically viable economy should provide and how it might function (like Right Relationship); or on a particular aspect of the whole (like Barnes' Capitalism 3.0). Only a few of these suggestions are specifically relevant to the challenges presented by a contracting economy and how it might be able to function without collapsing.

I also read a description of "The Economic Growth Trap" by David Delaney. He begins by stating that unless economic growth stops for some other reason, it will eventually end in catastrophe because of resource depletion and biosphere degradation. He concludes by stating that political initiatives to end growth will be opposed by investors with every means at their command, which will likely prevent any such proposals from even becoming politically contentious.

It is striking to set these statements beside the conditions that Jared Diamond identifies as enabling a society to avoid, or fail to avoid, collapse. This brings to mind John Cobb's comment that he remains hopeful because he believes that miracles are possible if we are faithful to our understanding of what we can contribute to a miracle of making what seems impossible happen. Which is why it seems so important to consider what would be needed for an economy to contract without collapsing.

Delaney identifies four systemic reasons for dependence on economic growth: 1) the need to offset job loss from increased labor productivity; 2) the nature of money created by the banking system; 3) the need to maintain tolerance of inequality; and 4) the expectation that financial markets will yield a return. Four more reasons come to mind that also seem essential to consider: 5) the impetus to increase energy intensity, 6) the relatively high costs of repairing, reusing, and recycling; 7) the linking of personal self-worth with rising income and more possessions; and 8) the effects of population growth on economic through-put in affluent societies.

Several of these reasons have known solutions in a market context if the political will can be mustered. These include

(3) establishing maximum and minimum incomes through progressive and negative taxation; (2) imposing a 100% reserve requirement on the banking system; (5) making energy prices rise by internalizing costs and regulating emissions; and (6) using tax shifting and cap-auction-trade regimes to begin reducing resource throughput.

Several others present challenges of yet-to-be-developed know-how within a market context that are perhaps akin to safely sequestering carbon or producing hydrogen safely and economically. I propose to describe these challenges as rethinking capitalism, rethinking finance, rethinking productivity, rethinking employment, and rethinking rights and responsibilities; and to ask some questions relating to each.

Rethinking capitalism:

From a “whole earth” perspective, real capital is a physical stock that provides inputs to the economy. Four types of real capital are distinguishable: natural capital, human capital (personal knowledge and skills), social capital (organizations), and manufactured capital (factories and furnaces). Financial capital is a social construct, with no physical limit to its size, that can enhance social capital or enable clever individuals to play monopoly. Intellectual capital is a special case.

“Capitalism” initially referred to private ownership of manufactured capital. Its goal was to expand the stock of manufactured capital, for which financial markets were a useful though problematic tool. The morphing of capitalism from factories to finance has been an aberration based on perverted logic; its consequences are now in full view.

The goal of commonwealth capitalism should be to optimize the four stocks of real capital - natural, human, social, and manufactured - relative to one another.

Questions:

How can stocks of natural capital, human capital, and social capital, and their yields, best be valued and compared with manufactured capital stocks and yields so that the investment of energy can be allocated in such a way as to optimize the maintenance and improvement of these four fundamental capital stocks?

How can markets be structured so that their benefits can contribute to the foresighted allocation of energy to maintain and improve society’s stocks of natural, social, human, and manufactured capital?

Rethinking productivity:

In conventional economic theory, the only limit to what the economy can produce is what people can make based on what they can imagine. From this perspective it makes reasonable sense to think of productivity as how much monetary value a person can create in a given period of time. But in the economy of “Earth as a space ship,” the anticipation of peak oil has pointed to the reality of peak everything. If civilization endures, sooner or later, human economies will have to depend primarily on finite inputs from re-using, recycling, and the sustainable harvesting of renewable resources, including the harvesting of energy from the sun in its various forms.

When this understanding becomes widespread, it will become clear that productivity should not be measured in dollar value per person hour, but of use value per calorie or BTU of expended energy. Increasing productivity would then mean reducing the energy needed to provide a good or service over time; e.g., longer lasting means more productive.

Question: Will increasing the costs of energy and material resources be sufficient...

- to make that which is more durable more marketable?
- to make repairing, re-using, recycling, and redesigning more profitable?
- to optimize the use of human energy in relation to energy from some other source, while protecting workers from physical danger and abuse, and downward pressure on wages?

Rethinking Employment

Herman Daly comments that full-time external employment for all is hard to provide without growth. But many people will cause trouble if they are prevented from doing something useful. As Kenneth Boulding might say, allowing this to happen is no way to run a spaceship. There is a lot of potentially useful work that is not being done, and a lot of basic products and services, like food, that can be made far less energy intensive by making them more labor intensive.

Questions:

How can subsidy shifting and tax shifting make it profitable for small businesses and feasible for non-profits to pay low level wages for on-the job training while enabling market mechanisms to reward the more effective programs by attracting more employees through competitive wages and working conditions?

How might small entrepreneurs be able to propose and be employed to undertake innovative for-profit projects in local communities as one way of maintaining employment in a contracting economy?

Why not give convicts a choice of the correctional facility in which to serve their term, so prisons would be rewarded by having more inmates if they are better at helping prisoners be successful during and after their incarceration?

Rethinking Finance

Questions:

How can conflicting views of the nature of money and the monetary system be resolved so the design of the monetary system can be made suitable to commonwealth capitalism?

How can institutions of finance at all levels - global, national, regional, local - manage savings to provide the financial capital needed to maintain and improve society's stocks of natural, social, human, and manufactured capital at optimum scales. How can the benefits of market mechanisms be incorporated into the design of these institutions?

Rethinking Rights and Responsibilities

Questions:

If everyone has a right to having their basic needs met...

- How should water be allocated within societies and among species?
- How should human numbers be stabilized and then reduced to a level that optimizes the four forms of real capital in various regions of Earth? How should the optimum level of human capital be determined? How can the nature of this question be squared with the sacredness of human life? With reverence for all life?
- How should resources for health care be allocated within societies? To what extent should health technologies be regulated to prevent pollution?
- How can socialization, education, and the messages conveyed by the media be managed so as to balance the rights to freedom of thought and expression with the need for values, attitudes, and motivations that are compatible with commonwealth capitalism?
- How can markets for good and services be managed so as to balance the rights to privacy and freedom of choice with others' rights to have their basic needs met, including an implicit fundamental right that human societies not exceed their biophysical limits?

What to do about Economic Growth

by Steve Szeghi

With the Global Engine of Economic Growth grinding to a halt we face the dilemma of great opportunity coupled with great danger. Economic calamity brings with it the opportunity to make profound and dramatic changes in the underlying structure, goals, and attitudes of the economic system. But the world clamors for the engine to restart and sometimes the clamoring seems deafening as little else seems to matter to citizen and politician alike, but to just get the engine started again. Hence the danger, for as the economic crisis grabs the attention of the media and the masses, the greater crises of justice, the environment, and the ability of the earth to sustain life all struggle to gain traction and meaningful attention.

GDP growth over the last thirty years has not brought economic or social justice or greater equality, ecological sanity, a better relationship with the earth, happiness, quality relationships, or even much of a rise in median income. Yet the notion of a rising tide lifting all boats is firmly planted in the popular mind and will take time to challenge. And that is the dilemma. The earth, biodiversity, and the web of life do not have much time.

Yet, we can not afford to turn away completely from economic growth as a social goal unless we strengthen full employment as a policy – perhaps government as the employer of last resort—and establish a much better social safety net consisting of a greater abundance of merit goods inclusive of health insurance for all and college education. The masses of humanity are quite convinced, due to clever marketing of the growth agenda, that continued economic growth is needed to insure their basic needs and to give them a shot at the good life. So until basic human needs for all the worlds people are seen as a right, challenging an unqualified growth agenda will remain a difficult balancing act. We need enough growth or at least stability, to bide sufficient time to gently transform attitudes and opinions away from the notion that growth of GDP, particularly unqualified growth of GDP is all that matters. Otherwise the bulk of humanity, those who are poor, may rightly fear that a right relationship with the earth will be at their expense.

If the purpose of an economy is to provide basic needs and to provide a means for social interaction, cohesion, and integration, as well as the ability to make a meaningful contribution, then economic growth and efficiency as traditionally defined –in terms of consumer sovereignty- will recede in significance.

Want fulfillment and material accumulation have become pale substitutes for social belonging. What we really need and want, what really succors is right relationship with other people, with community, and with nature. E.O. Wilson's biophilia is a reflection of that desire as is the fascination with the romance novel or movie –placing it all on one person, as is the ever growing popularity of indigenous culture.

Lacking the security and belonging of the tribe, the group bond, ties to nature, people revert to the vain attempt to find security in what they possess, in the things they accumulate – and it is never ever enough. Want fulfillment, material accumulation and especially shopping and gawking at what we can never afford has become the new opium of the masses. Our natural desires and instincts are thereby

suppressed.

Economic growth throughout the long history of humanity has been the exception rather than the rule. After the industrial revolution growth was propelled by waves of innovations and economies of scale, and more recently by gadgets, frills, and more and more credit. It is entirely possible we have reached a point of collapse and continued economic growth is not possible. Such a prospect would not be a tragedy since economic growth as witnessed these last thirty years has not brought with it greater equality, the provision of basic needs, nor a right relationship with the earth and other species. We may be about to run out of gas both literally and figuratively. The engine of economic growth may be about to stall permanently. Yet we can't depend upon running out of gas before we drive ourselves off a cliff and sink the planet in the process.

It is likely the case we have ample gas to drive ourselves off the cliff. The goal of policy should be to make sure that we do neither, hence preserving resources for future generations, and allowing the diversity of life on this earth to flourish in abundance. Yet at a time of economic insecurity and panic people have to be gently weaned off the growth obsession or they will fall prey to demagogues who will champion the growth at any cost agenda and thereby drive us all off the cliff. A strong social safety net along with greater social cohesion and belonging will assist in the weaning process.

The type of economy we need to birth in order to survive is impossible without a rethinking of what we mean by freedom. There is much illusion involved in the whole idea of individual choice particularly when it is assumed to be rational, just as the individual self separate and apart from the group may be an illusion. Real freedom is the freedom from illusions, from manipulation by commercial interests, from the wants and desires cultivated by a culture of continuous advertising. Real freedom is grounded in love and belonging. There can be no freedom without Right Relationship. Right Relationship is Freedom.

Once people traded and bartered in order to establish, nurture, and maintain relationships. The propensity of reciprocity, shared by animals and people is more deeply rooted than Adam Smith's propensity to truck and barter. Today though, people establish 'relationships,' relationships in name only, in order to do business with one another. As such we walk alone, alienated from one another and from the wider community of the natural world. Commerce, GDP growth, and want fulfillment have suppressed our natural instinct for what would truly quench our thirst, Right Relationship.

We need time and some economic growth to wean people off the obsession with growth, becoming again grounded in the simple joys of being and relating, transforming attitudes towards economic growth and what we mean by efficiency. But Earth's capacity for resilience in maintaining a diverse web of flourishing life is running out of time.

Agricultural biotechnologies

Anne Mitchell

The development of new technologies, it is often argued, will get ourselves out of the problems we have created. Right Relationship: Building a Whole Earth Economy addresses this in several places. The book also asks about what is fair regarding technology and points out that technology is the constant push by industries for limitless growth. It is also acknowledged that innovative technology will be part of building a whole earth economy. The questions, of course, are: who controls innovative technology and its development; who benefits; who decides what applications of innovative technologies will be pursued; and who bears the risks?

I will refer to only one of these innovative technologies - agricultural biotechnologies. It is argued that agricultural biotechnologies will solve the world's hunger problem by increasing the production of food. Vandana Shiva in the film "World According to Monsanto" has indicated that controlling food production will be more effective in controlling people than war. How do we bring agricultural biotechnologies into right relationship to build a whole earth economy?

Agricultural biotechnologies are evolving at an increasing pace. The issues are complex and the long-term impacts – economic, societal and environmental – are largely unknown. The Canadian government has indicated that its vision is to establish itself as a leader in innovative technologies, including agricultural biotechnology. Government policy is to position innovative technologies as an economic growth driver and job creator in the 21st century. These technologies continue to raise a variety of ethical, ecological, social, economic and even theological concerns. There is a need for dialogue among governments, industry and civil society groups to address basic questions such as what is the problem that these technologies are supposed to fix?

Despite funding through such institutions as Genome Canada, little is being done to integrate science, economic, social, ecological and ethical research so that holistic policy recommendations may be forthcoming. Interdisciplinary and participatory research is crucial where the long term impacts could be far-reaching and are largely unknown. It would be prudent for the Government of Canada to develop policies that are precautionary, transparent and inclusive. It would be prudent that government funded research in this area be interdisciplinary and also participatory and transparent. Policy needs to allow for the creation of community based and stakeholder arrangements that engage civil society groups in dialogue on managing biotechnologies.

Policy can help address key questions such as: How will these biotechnologies impact communities; How can the benefits of these technologies be applied in an equitable way; How can damaging and potentially disastrous consequences to ecosystems and social systems be foreseen and forestalled? Biotechnologies offer unknown benefits and risks to society. Civil society is seeking an effective focus to maximise these benefits and minimize any risks.

Agricultural biotechnology is a contentious issue. Governments, industry and civil society have varying views and concerns. Civil society needs to strengthen its voice to participate in the ongoing dialogue. Hearing the views and concerns from all three sectors will result in better policy development. Proponents argue that these biotechnologies can help address hunger and relieve poverty. Critics of the technologies highlight the lack of long term research on health and biodiversity issues, reduced resilience, ecosystem effects, genetic drift and the concentration of seed production in a handful of multinational corporations. Just what the hazards and risks are, as well as the potential opportunities and benefits, and whether their distribution is equitable, have been and in many cases still are highly contentious matters. As these technologies are developed and commercialized, the challenge for governments is to make oversight more democratic. Many civil society organizations lack the scientific knowledge and confidence to engage on these issues. As well, avenues for effective public engagement are lacking.

The polarized debate on the use of biotechnologies has increased policy discussions on how to regulate the applications and processes involving living modified organisms (LMOs) at national and international levels. The distinctive challenges of biosafety (“the need to protect human health and the environment from the possible adverse effects of the products of modern biotechnology”- CBD), resulted in an international agreement known as the Cartagena Protocol on Biosafety. The protocol contains important rights and obligations for governments relating to the transboundary movement, handling and use of LMOs. The challenges of biosafety require an international regime to coordinate approaches between and among countries to ensure the safe use of products and processes involving biotechnologies. That is exactly what the protocol represents and the reason why it was negotiated. Canada has not ratified the protocol yet. Canada’s national regulatory approach focuses on the novelty of the product rather than the methods used in its production. Canada’s approach pays little attention to concerns that exist about biotechnologies, LMOs and their international implications.

Governance and policy structures need to be developed to manage these – and other evolving technologies. Research is required which will be participatory, proactive and provide broad policy perspectives on contemporary biotechnology issues as they impact communities in Canada and around the world. Specifically, the research is urgently required on appropriate institutional and governance approaches in six areas: public research funding; public input into policy review and advice; labelling of GMO products; regulatory regimes; liability issues; and trade-related issues.

As a start, it would be helpful if state of the debate reports could be prepared on the following:

- the current state of the debate around biosafety issues related to agricultural biotechnology;
- An overview on key components of the Cartagena Protocol;
- Policy recommendations on contemporary biotechnology issues in Canada.

The research outcomes from these reports could form the basis of a consultation process with relevant stakeholders: government officials, academics, lawyers, not-for profit organizations, environmental non-government organizations, faith groups and industries that play a major role in agricultural biotechnologies. This could be facilitated through list serves including CIELAP, the Council of Churches, Quakers, environmental non-government organizations and through partner organizations in other countries. Another outcome could be a policy brief with a particular focus on Canada.

Better public policy on agricultural biotechnologies – and other evolving technologies like nanotechnology - is crucial since the long term impacts of these technologies are largely unknown. Involving civil society in the dialogue, along with industry and government will lead to better policy outcomes.

Further reading on these issues - from a Quaker perspective:

Friends Testimonies and Biotechnology: Can We Speak for the Commonwealth of Life?

Biotechnology as Seen by Quakers: Moral Vision, Ethical Assessment, and Action

Available at www.quakerinstitute.org

As well, further information on this issue is available from the Canadian Institute for Environmental Law and Policy at www.cielap.org

Frontiers of social action workshop

Normand Beaudet

A moral economy should first be concerned about communities, and about its members' basic needs. A society organized in such a way should aim at providing sustained and secure access for everyone to emergency assistance, health services, secure shelter, basic food and clean water, and affordable energy.

Obviously, environmental sustainability is the foundation upon which these economic structures must be erected.

Security, essentially, is no longer the duty of the military, the police or any other state agent. It should become everyone's concern. Overly centralized energy supply routes or generation plants, worldwide networks of basic food supply, gigantic municipal water purification plants, and many other installations are highly vulnerable. These nodes of society's infrastructure, like hydro electric dams, nuclear power plants, and gigantic tankers are at risk when not protected from any individual "wrong-doer", or let's say nowadays "terrorists". Politicians and right wing security "freaks" know well how to benefit from this organised "fear building" reality.

Peace is therefore becoming an environmental issue. Communities' sufficiency in terms of essential needs is not only becoming an environmentally sustainable society project, but a state security issue. In the global warming context, a community's resilience capacity is a necessity for both physical and economic survival. In the 90's, the principle of bioregionalism was developed by politically engaged ecologists in the emerging "green parties" movement. This idea is becoming an increasingly important "state security" iconcern.

Billions invested in military and policing will never protect all essential and highly vulnerable infrastructure. How can we adequately protect millions of kilometers of hydroelectric lines? The complex web of critical food supply networks? And we know well the impact of Middle East tanker protection. Military and traditional security expenditures are a limitless waste of money on an insecurity-building societal project.

Building peace becomes building human-scale and highly safe communities, able to provide a set level of basic need sufficiency to their populations. Such a society will not feel threatened by events happening anywhere around the globe. When a community relies essentially on the biological potential of its geographic region for a secure supply of fundamental goods, its members will feel safe and confident. We will have an ecologically sound, and basically secure community: a moral community that respects the environment, and will not overreact to dramatic events. An ecological society project is the way to go, and a vulnerability reduction program, or peaceful program, is the way to reach it.

Financial greed has characterised the economics of this first decade of the millenium. Will elementary common sense characterise the second decade? Help people to fulfill their basic needs. Organise communities so they can feel secure.

Creating a Spiritual Economy

By J. Andrew Hoerner¹⁶

Director, Sustainable Economics Program, Redefining Progress

Most people spend most of their waking hours in productive activity. By work we feed ourselves and our children, and support our communities and our posterity. By work we make and preserve art and science, literature and religion. Work is, or should be, a major source of meaning and purpose in all of our lives.

Yet Left and Right alike perceive contemporary American society as suffering a deep spiritual malaise. We are alienated from work; our work does not serve us. Here in the richest society in history, our work does not assure that basic needs are met for all people. Many of us who seek meaningful work can not find it, or can not support ourselves or our families on the work that we do. We work harder than ever – the most hours per week of any modern society – often at the cost of neglecting our health, our families and our communities. And yet for too many of us that work does not provide us with joy, with meaning, with connection to nature, spirit, or one another. We work, not only for ourselves, but for a better world. Yet our work seems to lead only to ever-increasing inequality in wealth, income and the power that they bring, and our economies seem further and further away from our control.

Believers in a spiritual economy assert that we can and will make the deep and fundamental changes required to build a truly spiritual, values-based economy, and economy in which our work builds the world we want to live in and serves the best and highest in all of us.

What is a spiritual, values-based economy?

A spiritual economy:

- **Meets basic human needs.** It is an economy that feeds the hungry, heals the sick, clothes the naked, cares for the infirm, houses the homeless, and educates the young. It guarantees that basic needs are met as a matter of right, including a guaranteed minimum income and universal health care.
- **Provides opportunities for right livelihood** to all who seek work. It assures that opportunities for meaningful and productive work are available to all; that those who seek such work earnestly and diligently are able to find it; and provides assurances to all that their work is done justly and contributes to the good.
- **Assures a decent standard of living and a healthy workplace environment to all who work.** In wage-based economies, this means that employees will receive an after-tax living wage from their employers. It also provides the same assurance to those who work outside of the wage system, such as home producers. It promotes the physical and mental health of those who work. It protects workers from exposure to toxins, hazardous equipment, repetitive motion injuries, and excessive stress. It structures the workday in such a way as to encourage a reasonable level of exercise and personal care.
- **Supports the growth of knowledge and wisdom** in people of all ages. It includes a high quality public education through the college level available to all, and vocational education for

¹⁶ This statement was crafted by Andrew Hoerner in collaboration with the Spiritual Economy Working Group of the Network of Spiritual Progressives. © J. Andrew Hoerner, 2006, 2009.

those that choose not to go to college that effectively prepares them for good jobs. It structures work to encourage the acquisition of knowledge and wisdom throughout one's life. It includes moral education to support spiritual growth and good citizenship.

- **Values diversity.** A spiritual economy takes joy in our diversity, affirmatively valuing interaction with people diverse in creed, background, age, gender, sex, sexual orientation, race, language, national origin, ability, and political views – the entire spectrum of humanity.
- **Is open, forthright and transparent.** In a spiritual economy, accurate information about the costs and benefit associated with products and public and private productive enterprises is readily available; at the point where decisions to purchase a product, to invest, to regulate, or to otherwise influence the behavior of an enterprise is made. This should always include labels summarizing the impacts of products and their production on consumers, workers, the environment, and community. The books of all public and private enterprises, including compensation information, shall be open to all in a reasonable time, place, and manner.
- **Is participatory.** A spiritual economy provides workers, consumers and communities with effective methods to connect to one another and to participate in economic decisions that affect their lives.
- **Provides a proper balance between work, family and community.** It provides for the health of our families and communities by assuring that they can receive adequate contributions of time and material goods. In particular, it supports workers in taking more time – enough more time – to take care of their families and contribute effectively to their communities. It likewise assures that adequate economic resources are provided to public and community organizations to serve their essential purposes.
- **Honors and preserves nature and nature's bounty.** A spiritual economy treasures and preserves the places that we love and that feed our spirit, and preserves our natural heritage to future generations. It honors and preserves species and the health of diverse communities of living things, and acts as a steward of that health. It protects air and water from pollution, and interacts with natural resources and biological communities in ways that can be permanently sustained.
- **Recognizes our place in the larger community of nations.** A spiritual economy does not limit its assessment of values or consequences at the border of a single nation, but rather is mindful of the impact that its trade creates on the workers, consumers, and environment of other nations, and reflects that mindfulness in policies that assure that our trade serves the global good as well as our own, while respecting the self-determination of other peoples.
- **Treat workers as ends rather than means.** Work-places that encourage us to regard one another as mere instruments for personal gain are antithetical to a spiritual life and a spiritual economy. A spiritual economy incorporates effective workplace measures that encourage us to treat our fellow workers with respect, compassion, and, to the extent possible, with love.
- **Supports work as a spiritual or ethical practice.** Most adults spend more of their waking hours at work than in any other activity. As a result, neither a spiritual economy nor a fully-developed spiritual life is possible without integrating spirituality with our workday. Thus a spiritual economy will encourage each of us to incorporate our own spiritual and ethical beliefs and practices into our work-life, in a way that honors and respects the dignity and diversity of our many faiths, beliefs and values.

An overarching value and requirement for a spiritual economy is to that it has institutions and rules under which those that do good can thrive, and those that do harm face corrective forces. This rule

applies to companies, government agencies, and to charitable or nonprofit groups alike, and equally to the largest enterprises and the smallest. Any economy in which those institutions or enterprises that do not honor the basic tenants of a spiritual economy have a competitive advantage over those that do faces an inevitable slide toward a spiritual void.

In a spiritual economy, on the other hand, productive enterprises that do good will do well. If an enterprise provides valuable products or services on terms that contribute to the common good; provides its workers with a decent standard of living in a healthy workplace; encourages learning and growth in communities that value diversity; deals fairly, honestly and openly; encourages participation in decision-making by workers, consumers, and community members while encouraging a good balance between work and personal life; produces in a way that is environmentally sustainable; does good rather than harm in what it sells to and purchases from other nations; and encourages its workers to treat one another as ends rather than means, with honor, justice and compassion; then this enterprise will thrive; and will thrive better than other enterprises that do these things less well.

Some will see this as unrealistic. They are wrong, both morally and factually. In the long run, a spiritual economy will do, not merely good, but well. A spiritual economy will, almost by definition, help all of us to be healthy, happy, wise and good. But in addition, a healthy, honest, well-educated workforce, honored and respected, motivated by the knowledge that their work serves the common good of their community and the world, in harmony with the fundamental forces and flows of nature – such a workforce will be the most productive the world has ever seen, or could ever see. Spirituality in the economy does not harm us. It serves us.

Foundations of Spiritual Economy

The values expressed in the twelve principles above are our common heritage from many sources. They are held nearly universally by the world's great spiritual traditions, and by progressives of every stripe. But they are not peculiar to the spiritual or the progressive, and indeed are held by many if not most who would style themselves as conservatives or who derive their ethical beliefs from our great secular traditions and philosophies.

To trace the antecedents of each of these principles to their many roots would take a book, indeed many books. Let us, however, make two observations. The first is that all of the values contained in this statement can be found in every major world scripture and ethical teaching without exception, or are natural extensions of those teachings. They can all be found in the consensus statements produced by the thousands of delegates representing nearly 200 religions that met at the World Parliament of Religions.¹⁷ And they can equally be found in great secular ethical statements such as the Universal Declaration of Human Rights of the United Nations.¹⁸ These principles are usually near the core of the spiritual tradition. The Christian Bible, for example, tells us to feed the hungry, not once or twice, but hundreds of times, more often than any other command, even to the commands to love, fear or serve God. Most religions are comparably forceful in this regard.

Finally, there is no principle listed here that is not a natural and obvious application of the Golden Rule. The command to treat our fellow-workers, and similarly our customers, suppliers, and members of our families and of the communities where our work is done, as ends in their own right, fellow-beings

¹⁷ See, e.g., <http://www.cpwr.org/resource/resource.htm>.

¹⁸ <http://www.un.org/Overview/rights.html>.

deserving of care, respect, and consideration, rather than merely as means to our own, can be regarded as a simple application to the work-place of the Golden Rule, which is truly among the spiritual universals—some version of it can be found in religions including Baha’ism, Christianity, Hinduism, Islam, Judaism, Zoroastrianism, and in the works of many great secular philosophic teachers such as Confucius and Immanuel Kant.¹⁹

The goal is clear, and clearly desirable. What remains is to map out a path to get there.

End of “**Creating a Spiritual Economy**”

I close with a few thoughts on the moral economy for this conference.

Our current economy is distant from the one described in the text above. As in the U.S. Pledge of Allegiance, where we commit to supporting the *ideal* of the USA, a nation “with liberty and justice for all,” so our commitment to a moral economy is to the ongoing struggle to create such an economy. Much of this struggle is necessarily collaborative. Individuals must act together to create the necessary incentives and institutions. Individual action is often ineffective unless it is done together with others or in a way that moves others. If I have a criticism of *Right Relationship: Building a Whole Earth Economy*, it is that too much of it seems to me to be mere wishful thinking, describing a different economy without describing the path to it, the likely challenges to it from without and within, or what is needed to make it stable in the face of those challenges.

What, then, is the obligation of an individual confronted by a deeply immoral economy? My short answer is that each person needs to take stock of their own resources and position in the wider world, recognizing that those working for a moral economy will, at least at first, be a minority. Our obligation is to each individually support the process of transformation *as well as we can*, given who we are, where we are situated, and our other obligations. Typically this will mean joining with others in our churches, our workplaces, our charities and advocacy organizations, and our political parties. Together, we are strong.

¹⁹ See, e.g., Leonard Swidler, “Toward A Universal Declaration of a Global Ethic,” Sec. IV. <http://astro.temple.edu/~dialogue/Center/intro.htm>.

Panel Presentation

Gary Gardner

Thomas Lovejoy recalls in the foreword to *Right Relationship* the observation that *economic* and *ecological* both begin with *eco*, rooted in the Greek *oikos*, or house, to stress the common ground that links the worlds of nature and of commerce. Allow me to stretch the observation a bit and note that *ecumenical* shares the same root, which opens the door for participation by people of faith in the discussion about recasting economies to care for nature as well as people. For many people of faith, building a Whole Earth Economy is not foreign territory.

Indeed, while discussions of sustainable development often focus on changes in technologies and policies, the heart of sustainable development is a fundamental change in worldview, in which we reassess our understanding of our relationship with the natural world, and with neighbors near and far. Wisdom traditions are, alongside government, business, universities, and the media, key shapers of worldviews, and therefore potentially important allies in the effort to build Whole Earth Economies.

After all, the cosmological questions at the heart of most religious and spiritual inquiry (Who am I? Why am I here? What is my relationship with you, and with the larger world?) feed into the elemental questions addressed by a Whole Earth Economy (What is an Economy For? How can we make it Fair? How should it be Governed?)

I see the contributions of wisdom traditions in building a Whole Earth Economy as encompassing three areas. They are positioned to advocate for economies that are 1) environmentally-rooted, 2) critical of consumerism, and 3) committed to elevating the place of the common good among society's priorities. Wisdom traditions, to the degree that they take their teachings seriously, have much to offer on these fronts.

Ironically, of these three areas the most high-profile activity is found in the area of least historical involvement, the environment. Outside of indigenous traditions, most faith communities, especially in the great traditions of the west, have historically been silent on environmental questions. But to their credit, many faith groups are reexamining their texts and finding ample support for a commitment to a healthy natural world. Perhaps most surprising from my own country is the leadership role taken by Evangelical Christians in accepting a moral duty to protect the environment. The Evangelical leadership has taken a strong stand on the need to stabilize the climate, joining more mainstream groups in this cause and adding a traditionally conservative voice to it. Their involvement demonstrates the power of religious belief: once the issue was framed in a faith perspective, Evangelical leadership took a powerful committed position, and the Evangelical faithful are increasingly on board as well.

On the other hand, many religious traditions have extensive experience in warning about too great an attachment to the material world, especially through periodic pronouncements about the problems of consumerism. But faith groups have made little concerted, sustained effort to weaken the grip of consumerism, arguably one of the greatest forces of environmental—and spiritual—destruction in the industrial world today. Much more could be done to help people resist the pressure for ever-greater levels of consumption. Similarly, religions have a strong track record in arguing for the importance of solidarity with the disadvantaged and for serving the common good, but most are remarkably silent in making that noble teaching part of the modern debate on inequality, employment, investment, and other dimensions of the modern financial and economic crisis.

The world's wisdom traditions have many tools at their disposal to deal with these issues. Internally, rituals, teaching, and even houses of worship themselves can be powerful tools for creating a new worldview. The Christian churches calling for a "carbon fast" in Lent, urging congregants to

reduce carbon use during the 40-day preparation leading up to Easter, are adapting traditional practices to modern challenges in ways that reshape congregant's understanding of their place in the world. Similarly, houses of worship that place solar panels on their roofs, install energy-efficient lighting and equipment, or ban the use of pesticides practice good stewardship and leverage their own infrastructure to witness to their commitment to a healthy Creation. One of my favorite examples is the Adat Shalom synagogue in Bethesda, Maryland, that uses a solar-powered *ner tamid* (eternal light, which is typically gas-fueled) to signal the immanent presence of God, a powerful choice because of its spiritual and environmental double symbolism.

In their relations with the larger world, wisdom traditions can even more directly help create a Whole Earth Economy. Many houses of worship and religious institutions have substantial investment holdings, and some are committed to using this leverage to create a socially just and environmentally sustainable society. Collective expression of this work is found in the International Interfaith Investment Group (3iG), established to encourage religious institutions to support sustainability investment. Others use their purchasing power, such as the group of churches in England that uses its collective market clout to bargain for discounted rates on recycled paper, thereby stimulating the recycled market, lowering their ecological footprint, and lowering costs as well. Still others use their political power, as through the drafting of the Earth Charter, which had substantial input from people and institutions of faith.

In sum, religious communities are potentially powerful allies in the effort to build Whole Earth Economies. Their membership gives wisdom traditions political clout; their investments offer financial leverage, buildings and grounds are potential demonstration sites, and their teachings and rituals touch people at a deep and subtle, but often life-changing level. All in all, this is a powerful package of assets that could be hugely helpful in the effort to build a Whole Earth Economy.