Friends Committee on National Legislation
A Quaker Lobby in the Public Interest

Conversations on an Ecologically Integrated Economy

Prof. Philip C. Emmi

FCNL Friend in Washington

October/November 2014

Conversations on an Ecologically Integrated Economy

Philip C. Emmi
FCNL Friend in Washington and
Professor of Urban and Regional Planning
University of Utah
Salt Lake City, UT 84112-0370
phil.emmi [at] fcnl.org

Abstract

As a *Friend in Washington* at the Friends Committee on National Legislation during two months in the Spring of 2014, I was tasked with learning how different scholars, government officials and policy organizations address the need to have both a functioning economic system and a functioning environment. Both FCNL and I are aware that there are several lines of interpretation about this matter. We were curious to learn if any successfully reconciled the oft-presumed conflict between the two. We wanted to see if there was a transformative story in the offing. We created a semi-structured interview process organized around a set of eleven queries. These led respondent into a set of concerns about contemporary economic functioning and then out toward informed consideration of current and potential resolutions. Adding to a long-standing interest in this issue, I was able to interview eleven policy professionals, attend eighteen policy-oriented public events, scan dozens of policy organization web-sites and read over two dozen policy briefs. What follows are my reflections on this experience prefaced by notes on historical context and appended by details on persons and activities that informed this brief. Also appended is a note on ways to intervene in a system.

Historical Context, Metabolic and Political

Energy Slaves and the Culture of Growth: We live in a technologically and financially integrated economy. It was initiated by a mechanistic turn of mind and sustained by unfettered innovation. Mineralogy and mining technology has opened up the Earth and given us access to the concentrated energy of a Mesozoic sun. Abundant energy spurred further innovation. Our economy has surfed on the crest of a wave formed by a self-reinforcing energy-technology feedback loop. This dynamic has allowed us to insinuate our minds, money and materiel into most every planetary niche. Its unwinding in now so pervasive that it produces independently its own behavior and expands autonomously to fill every vermicular opportunity.

Perhaps we have been wrong to think so insistently in mechanistic terms. Doing so seems so natural. When reflecting upon experience at a fine grain and over the short term, innovation is easily attributed to individual creativity, economic success to entrepreneurial capacity, economic status to strength of character, and personal wealth to discipline, patience and control. These correlates seem as natural as an apple falling off a tree. But other patterns emerge when experience is viewed from a coarser, longer-term scale and from across a hierarchy of spatial scales.

When thinking in this way, these simple relationships are seen as if carried forward on a wave of energetic expansion underwritten first by coal and then by oil and gas - forms of energy that while stock-limited offer a much intensified energy flow. The following re-interpretations might resonate with some.

The righteousness of representation against slavery before the British Parliament not withstanding, Britain's rejection of slavery was due in large part to its machines having become more efficient than its slaves. The valor of soldiers in the field not withstanding, the Allied victory in World War II must also be attributed to its access to oil while the Axis Powers had to distill it from coal and otherwise rely upon human slavery. Within a decade of the war's end, fossil fuels met 93% of the world's energy demand, and with only 6% of its population, the United States consumed nearly a third of it. The prolonged success of our post-war economy must be due not simply to the prowess of our entrepreneurs and the efficiency of our markets but largely to the easy availability of our energy supplies. "The enormous fossil energy which we in this country control feeds machines which make each of us the master of an army of mechanical slaves," noted Admiral Hyman Rickover in 1957, "Our civilization rests upon a technological base which requires enormous quantities of fossil fuels."

Today, a North American household of five typically commands the energy equivalent of nearly 500 slaves - a luxury beyond the imagination of even the most indulgent Roman Senator. As a nation, we direct the service-equivalents of roughly 30 billion energy slaves – about the earth's current population four-fold (Nikiforuk, 2012).

During the last two centuries, global energy consumption has been on an exponential growth trajectory. This trajectory sustained even greater acceleration in population growth, economic growth, technical innovation, equity investment and debt creation. Growth in energy consumption undergirds Western cultural reality. We have evolved a growth culture. And ironically, we have become so profoundly dependent upon undifferentiated economic and financial growth that we rely upon it, instead of the quality of our relationships, to maintain social stability.

<u>Political Economy of Socio-ecological Disruption</u>: Yet less than one-hundred miles from Drake's first oil well and just more than one-hundred years later, another force emerged. Rachel Carson's (1962) *Silent Spring* exposed the petrochemical industry's impacts on wildlife and especially the effects of synthetic pesticides on avian mortality. She accused the industry of spreading misinformation about their products and governments of accepting industry claims without question. The book lent an immediate and ominous connotation to the economist's sleepy concept of an economic externality. It transformed a long-standing conservation movement into one dedicated to environmental protection and preservation. It ended a *laissez faire* approach to national pesticide policy, prompted a nation-wide ban on the agricultural use of DDT

and stoked pressure for passage of the National Environmental Policy Act and establishment of the U.S. Environmental Protection Agency (Musil, 2014).

Industry reaction was swift, comprehensive, fierce and most always deceptive. This set a pattern that persists today. From that perspective, the economy and the environment were henceforth to be regarded as antagonists. It was either one OR the other: never both one AND the other. Politically, there was little interest in having the economy and the environment simultaneously accommodated. There is limited interest in advancing their synergistic potential.

This perspective held sway and did not begin to crack until two much larger issues emerged, namely ecological disruption and economic vulnerability. These are intertwined global problems. Their resolution is impeded by a politically-enforced antagonism that has come to look less like "the economy versus the environment" and more like "your money and your planet." An antagonistic perspective has now become untenable.

Yet even today this antagonism continues to be shaped by money and finance and maintained by a disregard for ecology and earth system processes. A understanding of the interplay among these four (money, finance, ecology and earth systems) reaches back in time to a lineage of scholars and intellectuals. Arrhenius (1896), Soddy (1926, 1935), Boulding (1966, 1978), Fuller (1969), Caldwell (1970, 1972), Georgescu-Roegen (1971, 1976), Forrester (1971), Meadows (1972), Daly (1973, 1977), Daly and Cobb (1989) and others are notable in this regard. Their contributions precipitated a change of perception.

With acknowledgment of the scale and irreversibility of ecological disruption and the perniciousness of economic vulnerability, what was once advanced as a strictly competitive relationship is now more generally understood as a necessary and complementary one. The subtext of our conversations has changed: where we once asked, "If not profitable, then what?" we now ask, "If not sustainable, then what?"

Conversations and Reflections

I was invited by the Friends Committee on National Legislation to be a Friend in Washington for two months in the Spring of 2014. I was asked to help deepen its understanding of the relationship between the economy and the environment. Within a six week period, I researched numerous Washington-based organizations that focused on economic and environmental policy. I interviewed eleven individuals, typically policy program directors. (Names, affiliations and thumbnail sketches are appended below.) I attended over sixteen public presentations on related topics, read numerous policy briefs and explored dozens of organizational web sites.

Interviews were conducted around a set of eleven queries about an ecologically integrated economy as are noted below. These were informed in substantial part by the

Quaker Institute for the Future, Pamphlet 6, *Beyond the Economic Growth Dilemma* (Dreby and Lumb, 2012). The queries I soon discovered had a hidden structure: the first four lead one into a critique of our technologically and financially integrated economy, while the last seven drew one up into the emerging possibilities of an ecologically integrated economy. Queries were posted on a single card and shared with each interviewee. Each was asked to comment on any he or she felt inclined to address. Then less formal discussion typically ensued. Interviewees were gracious about the process and generous with their time. A requested 45 minute interview typically lasted over two hours. These experiences lead to a deepening reflection on the original eleven queries. A sense of this follows below.

1. Historically Gross Global Product has grown exponentially at rates three to four times that of underlying population growth rates and it doubles in size about every two to three decades. Why exponentially and why so fast?

Interviewees addressed this query from many differing perspectives. Many attributed exponential growth to one or more of the things that were obviously growing exponentially - population, technical innovations, urbanization, capital investment, resource exploitation, food supply. Yet a few were clear about the reinforcing feedback between fossil fuel extraction, energy availability and technological innovation as an underlying structural foundation. One interviewee spoke of the amplifying effect that this foundation had on reducing the risk and increasing the profit of most entrepreneurial endeavors.

These exchanges prompt further questions.

- During WWII, the Allies energy-return-on-energy-invested (ENROI) was on the order of 200-to-1. Now, on average, it is generally below five-to-one and declining. As ENROI declines linearly, energy costs per unit of energy consumed increases exponentially (Guilford, 2011). Will that encourage transition to a low-carbon economy and if so under what circumstances, to what degree and with what delay?
- Will ENROI decline, in turn, dampen global population growth rates and if so where, under what circumstances, to what degree and with what delay?
- We are in the midst of acknowledging evermore fully the social and environmental costs of energy extravagance. Will ENROI decline draw these more closely to mind? Will that prompt greater equity in how we regard the balance between ecology, society and economy?

2. Global economic activity has become the predominant force driving global-scale biologic, geologic, physical and chemical disruption: what does this mean for the development of theories about how an economy is supposed to work?

Interviewees with limited economics training had difficulty with this query. Those that did were quite plain-spoken. One said that global ecological disruption directs attention to economic theory's failure to address shocks, vulnerabilities, conflict, failed governance structures, political power dynamics and the discontinuities from abrupt temporal or spatial change. Another said that ecosystem disruption made cost-benefit analysis difficult to deploy and easy to abuse. A third was more direct: economic theory, he said, was ignorant of practical physical reality and the hard limits it imposes on the prospects for unconstrained growth. Another cited the importance of planetary boundaries set by earth system processes and economic theory's general disregard of their existence and the risks of their violation.

These exchanges prompt the following points regarding recent initiatives in the field of economics. In recognition of limitations in neo-classical economic theory, economists have opened the fields of environmental economics and ecological economics. The former typically seek to price the value of ecosystem services and work these services into the logic of neo-classical economics. The latter regards the value of ecosystem services as intrinsic and irreplaceable: ecological economists are dissuaded from reducing them to monetary measures. They prefer instead to explore the conditions under which an economy might be ecologically restorative.

- Can environmental economics promote consideration of ecosystem values on par with other economic values now readily recognized in popular discourse?
- In what ways might reducing ecological processes to monetary measures be necessary or helpful steps toward appreciating nature and honoring the intrinsic value of ecological integrity?
- Or does environmental economics simply draw debate into a pre-existing structure of discourse?
    - And if so, does this structure itself present part of the difficulty in resolving the tension between the economy and the environment?

3. To some degree, market prices are almost always distorted. Why and to what degree should these be tolerated? What does ethics have to do with this?

An earlier version of this query also asked about the definition of "good growth." The most cogent response was, "Good growth raises incomes disproportionately at the bottom. Infinite growth is possible but not infinite throughput. All prices are distorted. To have undistorted prices, you need to know the future." By this last point, I take it to mean that if prices are to be corrected to include social and environmental costs of extraction, production, distribution, consumption and waste, then one would have to know how these costs reverberate directly and indirectly through time and space, i.e., one would have to know he future.

But the interviews lets several points hanging. The exaltation of private property rights and the relative neglect of common property rights seem fundamental to price distortion. Sometimes government processes will recognize common property concerns. When they are, prices (or quantities) are often less distorted.

- Does this mean that before “getting prices right,” we need first to “set governance aright?”
- What roles do political power, legal practice and governmental administration play in the relative recognition of private versus common property rights? .
- How effectively does the moral and legal construction of private property constrain the relative recognition of common property rights? Is the current balance between the two a just balance?

4. What is the relationship between economic growth and human prosperity? Could this relationship be subject to diminishing or negative returns to scale?

Interviewees reflected findings from research that has been developing around this question. Much of this research is cast in terms of a measurement problem: how do you measure well-being? Empirical results to date suggest that, on a countrywide cross-sectional basis, well-being increases strongly with income up to around $10,000 - $15,000 per capita. Then the relationship flattens out with no gains obtained with further income increases plus a hint of declines in well-being at the higher income levels (Jackson, 2009).

This research intersects unexpectedly with the assessment of global-scale policies such as climate change mitigation. Assessments results vary widely with the setting of a time discount rate. One approach to setting this rate includes a term that captures the change in well-being as it varies in response to change in income. Should this term be negative for the highest-income countries as research might suggest, the appropriate discount rate would be less than zero. A negative discount rate would upend the short-term orientation of current investment behavior. It would affirm an economic rationale for investing now to benefit the next generation and beyond. Thus the relationship between income and prosperity spills over into the question of investment time horizons: to the degree that added income among the wealthiest fails to bring greater well-being, the greater the reason to invest for the benefit of future generations.

The interplay between selected interviews, public presentations, policy briefs and relevant research have left several related questions unattended.

- Is enough ever enough?
- What ethical principles establish a rationale for public and private investments with generational time horizons?
- Would such principles also establish a rationale for shifting capital formation from wealthy to poor countries?
- Would such principles resolve concerns about environmental justice, inter-generational justice, just relations among nations and a simple respect for nature?

- Could such principles redirect philanthropic and investment choices toward a socially and ecologically responsible conception of prosperity?

5. What new ideas might help transform a global employment crisis into purposeful work and meaningful livelihoods?

Responses to this query were scattershot. Several tied increased job formation back to the development of a low-carbon energy system. In a variation on that, others emphasized labor-intensive local energy generation and distribution. Another recommended upgrading public infrastructure nation-wide, re-orientating agriculture toward low-carbon, labor-intensive, locally-oriented practices and ramping up a manually intensive practice of urban agriculture. Those with a third-world perspective combined these approaches with micro-lending and the integration of women into small business practice. The value of local- and regional-scale enterprises was woven in. Science, technology, engineering and math were suggested as pathways to meaningful livelihoods for those with ample educational opportunities, but the same could be said for training in social entrepreneurship.

Most suggestions focused mostly on the creation of more jobs or more labor-intensive production. But some others focused on altering the nature of a job. These included ideas like having a shorter work week, having one job shared by two workers, having non-monetized service exchanges for communities of elderly workers, having easier access to job-training, having a social-security-financed mid-career job sabbatical, having shared work spaces for independent innovators, and having contract-worker co-operatives for better provision of health, training and retirement benefits.

Responses the issue of job purpose and meaning suggested a re-definition of work relationships rather than an increase in the sheer number of jobs. This then leaves the following matters in want of further consideration.

- Can co-operative ownership improve the nature and meaning of a job?
- Can local currencies help re-orient work toward community needs?
- Would a unified health insurance program increase labor mobility and job satisfaction?
- What would an international system enforcing uniform labor protection laws do to transform both commercial trade and labor relations?
- Could stronger family and community support systems improve market-base labor relations?
  - Would a minimum wage indexed to labor productivity gains do the same?
  - Would wage parity between genders do the same?
  - Would an international program of guaranteed work in community service or ecological restoration do the same?

- In what ways might de-globalization, fairly balanced trade agreements, sovereign debt relief and the curtailment of currency manipulation improve market-based labor relations?
- What impediments to the transfer of labor exchange from market-based relations to local, socially-based relations?

6. How do we protect and restore The Commons? What is the evolutionary potential of stakeholder engagement in managing commonly shared resources?

This question was actively on the minds of interviewees, authors of policy briefs and public event speakers. The range of commentary is too broad to summarize without resorting to a categorization that diminishes its richness. Many thought first about climate stability as a common property resource needing protection. Others emphasized access to water referencing especially the vitality of soils, forests and grasslands. A third concern lay with culture, law and human motivation as elements in mitigating further loss and organizing added protection. Here are other questions raised by this query.

- Does economic efficiency slow degradation of The Commons or simply encourage more consumption?
- How can we support better governance, fewer destructive subsidies and tax exemptions, better local administrative capacity and more honest political campaigns?
- How can we re-direct investment toward mitigation and restoration? Toward re-thinking agriculture? Restoring forests and grasslands? Toward greening cities?
- How can we affirm the rights of indigenous people to protect their common property and cultural traditions?
- How can we strengthen regard for the common trust doctrine? How can we support the constructive application of common trust law?
- How can we rectify the injustice and devastation of rent-seeking , i.e., from profiting by merely owning a resource that is prior to human culture or that is the collective product of it?
- How can we tell a new story about our commonality with one another and the whole of life? How might we use a more spacious language to make room for a broader view of human purpose?

7. How might corporate governance be made consistent with an ecologically integrated economy?

Responses to this query had the quality of frustrated aspiration. For ever so long, it has been impolite to mention examples of irresponsible business practice: business's cultural influence has been too strong. Even today, when Kids vs. Global Warming sues our government for failing to protect against climate change, the National Association of Manufacturers petitions the Department of Justice to join in as a co-defendant. Institutionalizing ecologically responsive forms of corporate governance and governmental administration constitutes a classic Catch-22 – the first can not be had without the second and the second without the first.

So most responses were work-arounds. They advised constraining corporate influence, recognizing community rights, regulating access to hazardous inputs, and activating aspirational social movements.

- What measures can be taken to constrain corporate influence over politics and politicians acquiescence to corporate interests?
- The government-sponsored corporations, Fannie Mae and Freddie Mac, were recently placed in public trusteeship. Corporations are creatures of the state: what might we understand about the conditions under which corporate functions should be transferred to a public trusteeship? Would the egregious corporate behavior be tempered were corporations vulnerable to such transference of function?
- Some states regulate access to the ingredients to methamphetamines. Would regulating corporate access to hazardous inputs complement hard-to-implement regulations regarding hazardous outputs?
- How might governments help expand the scope of corporate responsibility both globally and locally? Under what circumstances do a community's environmental rights trump a corporation's property rights? Is there an imbalance to be rectified?
- Does an ecologically integrated economy require the affirmation of a community's right to a healthy environment? Is this prospect sufficient to inspire a politically effective social movement?

8. In what new ways might money, banking, debt and financial practices contribute to the formation of an ecologically integrated economy?

For some, this query drew a blank. But for those who had some familiarity with this matter, responses were vigorous and insightful. Some respondents said that this was a strategic leverage point in the system. Most insights were based in an understanding that money and banking had been fundamentally transformed. Gone are the sleepy days of community banks and local savings and loan associations. With the globalization of communication, trade and finance, the lax regulation of fractional reserve requirements and the blending of banking and finance functions, money can now be created easily and sent anywhere by the simple issuance of debt. Only about three percent of the money in circulation is in the form of coins and currency bills. The rest is in the form of debt and debt-based financial instruments. The vastly expanded scale of debt-based money transfers political power to an international financial community that now exceeds the powers of most, if not all, sovereign nations.

As President Woodrow Wilson stated after understanding the effects of his signing the Federal Reserve Act,

> "I am a most unhappy man. I have unwittingly ruined my country. A great industrial nation is controlled by its system of credit. Our system of credit is concentrated. The growth of the nation, therefore, and all our activities are in the hands of a few men. We have come to be one of the worst ruled, one of the most completely controlled and dominated governments in the civilized world. No longer a government by free opinion, no longer a government by conviction and the vote of the majority, but a government by the opinion and duress of a small group of dominant men." (Wilson and Hale, 1913: 185)

Yet the issue goes beyond matters of control. We learn now that with high levels of interbank connectivity, banking systems risk financial contagion and are systematically unstable (Besley and Hennessy, 2009). The system is vulnerable to its own successes – creating a nearly intractable dilemma. While institutions of great power prize the functional efficiency of its constituent organizations, they have little capacity to assess risk to the system as a whole. And as history teaches, without this capacity, they fall afoul of their own single-mindedness. Thus the true test of any great institution is not the strength of its power but rather its ability to safeguard against the folly it risks with its full accession to power. Insights into this dilemma suggest the following considerations.

- Through what means might we attain greater collaboration among investors, financial institutions, business enterprises and civil society?
- Climate risk refers to the multiple aspects of risk an enterprise faces due to climate change. How might we encourage creditors to take this risk more actively into consideration when reviewing corporate loan applications?
- Regarding the documentation and exchange of financial instruments, how can we favor transparency and discourage obscurity?
- Would the principle of subsidiarity - devolving a function to the most appropriate local level - be wisely applied to decision making in the financial industry?
- What benefit would accrue were tax laws designed to encourage an emphasis on long-term investing and strongly discourage the pursuit of short-term returns?
- If money is so easily created, why does this simple capacity empower creditors to charge interest rates well in excess of the probability of default? Would there be benefit in transferring this power to a publically regulated utility?
- How can we re-construct financial practice so as to emphasize the value of relationships over transactions? Would it help if, instead of charging interest on a loan, a financial institution simply assumed a small fractional ownership in its debtor's enterprise?

- Quaker governors of the Pennsylvania Colony lent money at interest directly into the economy and spent the returns building public infrastructure, schools, libraries and hospitals. Within fifty years, life in Philadelphia was the envy of many Londoners. Could not governments today do likewise?

9. Is a socially integrated economy a pre-requisite for an ecologically integrated economy? What would that look like?

Responses to the first part of this query were direct and compelling. Yes, a socially integrated economy IS a pre-requisite for an ecologically integrated economy. Engaging responses to the query's second part were also direct and compelling. When one realizes that the ecology is simply the relationships that weave together the whole of life, then our most direct understanding of ecological integrity is as a pattern of right relationship among all living beings.

John Woolman (1720-1772) is the closest Friend that North American Quakers have as a patron saint. In his travels through the British Colonies, he saw lands made infertile through aggressive cropping practices. He saw laborers and livestock famished in the midst of plenty. He knew that unwise use of resources and unjust treatment of labor lead to collapse and ruin. There was a “wrong spirit” afoot on the land. He saw that “the seeds of a great calamity and desolation are sown and growing fast.”

Today we bring a new language to our understandings of such “relatedness.” Today we speak of such insights in terms of complex interactions among interdependent system components characterized by feedback, response delays, oscillations, phase changes, unanticipated outcomes and emergent behaviors. We know that disrupted relationships often diminish life’s sustaining qualities. Understanding relatedness is a balm to vulnerability, a salve to risk and uncertainty, a key to resilience and a path to restoration.

But how is an understanding to be attained? A quick look at conflict and its management offers ready insights. Conflict is often usefully considered in terms of the urge to satisfy self (assertiveness) versus the urge to satisfy others (cooperation). Uncooperative assertiveness yields competition. Unassertive cooperation yields compliance. Uncooperative non-assertion yields avoidance. None of these three strengthen relatedness. Only with active collaboration – a mode of cooperative self-assertion – is there mutual learning and shared insights into one another’s context and concerns.

A similar line of reasoning applies to human collaboration with nature.

Yet, collaboration maintains a sense of separateness. Presently, practicing relatedness in a way that dissolves a sense of separateness is rare in western society. Given this present limitation, it may be helpful to hold open the following queries.

- When is our struggle for ecological integrity not also a struggle for social justice? And visa-a-versa? How can civil society organizations work together in ways that reflect this understanding?
- Of what must we let go and let come to expand our understanding of relatedness?
- How might our lives become a focused articulation of these deeper understandings?
- How might we bear witness to the possibilities embedded in right relationship?

10. What might be the relationship between an ecologically integrated economy and the development of human values?

Abraham Maslow (1998) initiated an intellectual tradition that has since refined in detail a progression of human values. The modal member of our society stands about half way along this progression: as a society we have yet a long way to go. Our present condition can be generally characterized as being on the threshold between two worlds – one a world full of problems with which we must cope, the other a world full of projects in which we want to participate (Hall, 1994; Joy, 2011).

The contemporary construction of market relationships acts as a drag on progress in human values development (Joy, 2011). One respondent said, "The market makes us who we are." By that, I suspect he meant that a societal emphasis on economic status focuses attention on "having" instead of "being" – on having marketable skills instead of being in right relationship with self and others.

Many of us live with a sense that we inhabit a sacred world. We live in the presence of that which infuses all creation with it luminous vitality. This presence pulls us gently toward higher human values and societal priorities. Today we struggle trying to integrate patterns of economic relations into a more luminous whole. That struggle is simply us resisting that gentle upward pull.

Fear and insecurity are the anxieties the cause us to resist. Here are some queries to help set them aside:

- What is the role of quiet attentiveness in learning how to stop struggling?
- How can we learn to listen whole heartedly?
- How do we mobilize the patience and courage to really pay attention?
- How do we find that inward place where we learn of that which we need to let go and to let come?
- How do we then act with intention as though a vehicle for the future that wants to emerge?
- Can we trust that needed values will then emerge?
- Does the presence of a supportive community help or is this to be done alone?

11. What are the opportunities and impediments?

This query was an invitation to a more open discussion. Here is a summary of what interviewees said, the postures taken in regard to the question, and a dimension of the matter disserving further attention.

Interviewees offered a dozen items regarded as opportunities.

- Lengthen investment time horizons for more responsible capital formation.
- Extend networking among actors who bridge between academia, faith communities, civil society and centers for policy studies.
- To facilitate progress in human values development, call out the spiritual and psychological implications of having markets "make us who we are."
- Acknowledge the reciprocity between modes of economic organization and stages in the development of human values.
- Redesign forums for deliberation and discernment at the national policy scale.
- Improve management of The Commons.
- Integrate a localized, low carbon economy across social and industrial sectors.
- Rededicate jurisprudence to affirm human rights over both property rights and corporate citizenship.
- Orient the geopolitics of food toward socially and ecologically integral ends.
- Establish and adher to a carbon budget.
- Reform of banking and financial institutions. (Adopt a 100% bank reserve requirement; return the creation of debt-based money to the public domain.)
- Improve the transparency, accountability, and inclusiveness of the world's global financial institutions together with a greater responsibility for ensuring financial stability and economic equity.

The US Constitution was cited as an instrument to resolve problems of a foregone era and thus as an obstacle to adaptive change – perhaps because of the way it impedes attaining aforementioned opportunities.

Characterizing the postures taken toward this query is an unfortunate rhetorical act, because characterizations diminish rich and nuanced understandings. While grossly incomplete, characterizations might help others locate their own posture among a host of possibilities. And they might identify where opportunities for cooperation lie.

- From one seasoned respondent, "The System is not broken; it just needs to be freed from distortions."
- Counterpoised to this, "The way money and politics work together is determinative;

it's the political economy, friend, and it's fundamentally flawed."

- Less strident is the position that, "An ecologically integrated economy requires a recovery of democracy." The vagueness of this statement is its greatest strength.
- Offering greater specificity, "Economic relations benefit from being embedded in harmonious social relations."
- An ideologically neutral variant, "There is much good work to be done" …
  - Advocating “a thorough-going reform of global financial institutions.”
  - Advancing “the urgency of improved food security.”
  - Promoting “the indispensability of campaign finance reform.”
  - Engaging in “more extensive networking,” and
  - Focusing networks on “strategic alliances between civil society organizations, faith communities and public policy experts.”
- And finally from the advocate of organizational learning:
  - “Strengthen relations among various civil society organizations.”
  - “Incite a theological shift among faith communities,” and
  - “Advance the practice of resilient thinking among public policy specialists.“

Serving as a Friend in Washington with FCNL provided a unique perspective on how the present issue is being considered. However something was missing or at least neglected. A certain dimension disserved greater attention. This dimension is akin to the New Story advanced by Thomas Berry (1999, 2009), Brian Swimme (1996), Mary Evelyn Tucker (1994, 2003), Swimme and Tucker (2011) and others. It is a story grounded in the miracle of life's evolution. It offers a vision of how we might align ourselves with this unfolding miracle.

Many find renewed inspiration and meaning in this story, but it is too far ahead for most. Its meaning is too remote. It jumps over the immediate next step. It moves forward too fast. It leaves too many behind without a bridge between where they are and where this story invites them to be.

The dimension missing from an accessible vision of an ecologically integrated economy is to be found in the human-values/societal-transformation nexus. Here is where we find the immediate next step. Here is where we begin to build the necessary bridge.

In my judgment, the policy community neglects the role this nexus plays. Typically the question is, “What should we do?” The typically neglected question is, “Who should we be?” The Washington policy community seemed engaged in intense discussions implicitly grounded in consequential and deontological normative ethical theories. What I did not see was an equally intense discussion of virtues ethics and care ethics – not ‘what should we do’ but ‘who should we be and how should we relate’ – not questions of policy but questions of values and the dynamics of values development

(Engster, 2007; Palmer, 2011). The former focus is what makes the economy/ecology issue a 'problem with which we must cope' instead of a 'project in which we want to participate.' This omission seems strategic to all else.

The next step in human and societal values development rests upon six premises. (1) Values are experienced subjectively as priorities and objectively as habits, choices, behaviors and relational patterns. (2) Our society's political economy is a pattern of functional interdependencies and decision processes directed toward capital formation, financial accumulation, the selective provision of wants and needs, and the maintenance of social order. (3) Human values attune themselves to political and economic realities just as these realities respond to changing value priorities. (4) A specific set of values is congruent with an industrial economy and its polity of dependence, obedience and group compliance. Another set is congruent with a financially integrated economy and its polity of fragmentation, obfuscation, privilege and inequality. Yet still other values are congruent with an ecologically integrated economy and a polity grounded in relational intelligence, equitable interdependence and socio-environmental stewardship. (5) For most people, a shift to the values congruent with an ecologically integrated economy would be ***a joyous prospect***. (6) The ***joyous promise*** of a parallel transformation in both values *and* political/economic structures should be anticipated in policy deliberations, pursued in policy agendas and joyfully regarded as ***a cause for celebration***.

In short, now that critical analysis has contended sufficiently with the problem, the promise of a positive alternative becomes essential for hope and engagement. *Most people recognize the values consistent with an ecologically integrated economy as the values they want governing their lives.* They would celebrate an opportunity to bring these values into being. It is time we cross the threshold. It is time we blend analysis with celebration.

An Invitation

This report serves as a window into a broadening community of explorers seeking to d trace out pathways into the future. It is also an invitation to reflect and respond. The issues raised here are sobering. They can not honestly be ignored. The prospects explored here should provide direction, evoke hope and instill courage. In a manner of speaking, they exhort a reply. As George Fox implored, "You will say, Christ saith this, and the apostles saith this: but what canst thou saith?" Your comments, concerns and aspirations are warmly invited.

Acknowledgement

I found this project to be personally expansive and transformative. I learned things about myself that I had not known. I am very thankful to those who helped make it possible. Jim Cason, FCNL Associate Executive Secretary for Strategic Advocacy, disserves special recognitions for conceiving of the project's purpose, setting project goals and serving as overall guide and point person. Andrew Silva, Administrative Coordinator, took responsibility for maintaining domestic tranquility. José Aguto, Legislative Secretary for Sustainable Energy and Environment, and his Policy Assistant, Emily Wirzba, provided added direction and insight. Diane Randall, FCNL Executive Secretary, needs to be acknowledged for her vision in re-initiating FCNL's Friend in Washington program. A special note of gratitude goes out to my wife, Elaine, who support, diligence and organizational acumen were essential to putting all the right pieces together. And finally the interviewees must be acknowledged for showing me a nation's capital that, contrary to popular opinion, maintains a vibrant community dedicated to our nation's betterment through the assessment of current conditions, the analysis of public policy and the exploration of purposes yet to be achieved.

References

Arrhenius, S. (1896). On The Influence Of Carbonic Acid In The Air Upon The Temperature Of The Earth. *London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science (fifth Series), 41*, 237-275.

Berry, T. (1999). *The great work: Our way into the future*. New York: Bell Tower.

Berry, T. (2009). *The sacred universe: Earth, spirituality, and religion in the twenty-first century*. New York: Columbia University Press.

Boulding, K. (1966). The economics of the coming spaceship earth. In *Environmental quality in a growing economy; essays from the Sixth RFF Forum,*. Baltimore: Published for Resources for the Future by the Johns Hopkins Press.

Boulding, K. (1978). *Ecodynamics: A new theory of societal evolution*. Beverly Hills: Sage Publications.

Caldwell, L. (1970). *Environment: A challenge for modern society*. Garden City, N.Y.: Published for the American Museum of Natural History [by] the Natural History Press.

Caldwell, L. (1972). *In defense of earth: International protection of the biosphere*. Bloomington: Indiana University Press.

Carson, R., & Darling, L. (1962). *Silent spring*. Boston: Houghton Mifflin ;.

Daly, H. (1973). *Toward a steady-state economy*. San Francisco: W.H. Freeman.

Daly, H. (1977). *Steady-state economics: The economics of biophysical equilibrium and moral growth*. San Francisco: W.H. Freeman.

Daly, H. & Cobb, J. (1989). *For the common good: Redirecting the economy toward community, the environment, and a sustainable future*. Boston: Beacon Press.

Engster, D. (2007). The heart of justice. Oxford: Oxford University Press.

Forrester, J. (1971). *World dynamics*. Cambridge, Mass.: Wright-Allen Press.

Fuller, R. (1969). *Operating manual for spaceship earth*. Carbondale: [Southern Illinois

University Press].

Hall, B. (1994). *Values shift: A guide to personal & organizational transformation*. Rockport, MA: Twin Lights.

Jackson, T. (2009). *Prosperity without growth: Economics for a finite planet*. London: Earthscan.

Joy, L. (2011). *How does societal transformation happen?: Values development, collective wisdom, and decision making for the common good*. Caye Caulker, Belize: Published for Quaker Institute for the Future by Producciones de la Hamaca.

Maslow, A. (1998). *The hierarchy of needs.* Corby: Institute of Management Foundation.

Meadows, D. (1972). *The Limits to growth; a report for the Club of Rome's project on the predicament of mankind*. New York: Universe Books.

Meadows, D. & Wright, D. (2008). Chapter 6, Leverage points: Places to intervene in a system. In *Thinking in systems: A primer*. White River Junction, Vt.: Chelsea Green Pub.

Musil. R. (2014). Rachel Carson and her sisters. Extraordinary women who have shaped America's environment. New Brunswick: Rutgers University Press.

Nikiforuk, A. (2012). *The energy of slaves: Oil and the new servitude*. Vancouver, BC: Greystone Books.

Palmer, P. (2011). The healing heart of democracy. San Francisco: Jossey-Bass.

Roegen, N. (1971). *The entropy law and the economic process*. Cambridge, Mass.: Harvard University Press.

Roegen, N. (1976). *Energy and economic myths: Institutional and analytical economic essays*. New York: Pergamon Press.

Soddy, F. (1922). *Cartesian economics; the bearing of physical science upon state stewardship.* London: Hendersons.

Soddy, F. (1926). *Wealth, virtual wealth and debt; the solution of the economic paradox,*. New York: George, Allen & Unwin.

Soddy, F. (1935). *The role of money; what it should be, contrasted with what it has become,*. New York: Harcourt, Brace and.

Swimme, B. (1996). *The hidden heart of the cosmos: Humanity and the new story*. Maryknoll, NY: Orbis Books.

Swimme, B., & Tucker, M. (2011). *Journey of the universe*. New Haven: Yale University Press.

Tucker, M. (1994). *Worldviews and ecology: Religion, philosophy, and the environment*. Maryknoll, N.Y.: Orbis Books.

Tucker, M. (2003). *Worldly wonder: Religions enter their ecological phase*. Chicago, Ill.: Open Court.

Wilson, W. & Hale, W. (1913). *The new freedom; a call for the emancipation of the generous energies of a people,*. New York: Doubleday, Page & Company.

Appendix One: The Interviewees

Lester Brown, President and CEO
Earth Policy Institute
1350 Connecticut Ave., NW, Ste 403
Washington, DC 20009

John Cavanagh, Director
Institute for Policy Studies
1112 16th Street, NW, Suite 600
Washington, DC, 20036

Roger-Mark De Souza, Dir. of Population, Environmental Security and Resilience
Wilson Center
One Woodrow Wilson Plaza
1300 Pennsylvania Avenue
Washington DC 20004

Robert Engelman, Senior Fellow and ex-Director
Worldwatch Institute
1400 16th St. NW, Suite 430
Washington, DC 20036

Jo Marie Griesgraber, Executive Director
New Rules for Global Finance
2000 M Street, NW, Suite 720
Washington, DC 20036

Thomas C. Guevara, Deputy Assistant Secretary of Regional Affairs
Economic Development Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW, Suite 71014
Washington, DC 20230

Mitch Hescox, Director
Evangelical Environmental Network
24 East Franklin Street
New Freedom, PA 17349

Robert K. Musil, Director
Rachel Carson Council
8600 Irvington Avenue
Bethesda, MD 20817

John Schmitt, Senior Economist

Center for Economic Policy Research
1611 Connecticut Avenue, NW Suite 400
Washington, DC 20009

Andrew Steer, President and CEO
World Resources Institute
10 G Street, NE, Suite 800
Washington, DC 20002

Carol Werner, Executive Director
Environmental and Energy Study Institute
1112 16th Street, NW, Suite 300
Washington, DC 20036-4819

Appendix Two: Public Events Attended on the Economy and Ecology

The Atlantic*, 3rd Economy Summit*, 3/18.
- Douglas Elmendorf, Director, Congressional Budget Office
- Hon. Chris Van Hollen (D-MD) House of Representatives Budget Committee
- Grover Norquist, President, Americans for Tax Reform
- Hon. Michael Froman, US Trade Representative, Executive Office of the President
- Hon. Alice Rivlin, Former Director, Office of Management and Budget
- Hon. Judd Gregg, Former Chair, US Senate Budget Committee
- Hon. Sylvia Mathews Burwell, Director, Office of Budget and Management
- Hon. Shella Bair, Former Chair, Federal Deposit Insurance Corporation
- Jason Furman, Chair, White House Council of Economic Affairs
- Richard Trumka, President, AFL-CIO

Dr. Michael Clare, FCNL Briefing, 3/20.

Patricia I. Vásque, *Oil Sparks in the Amazon*, Wilson Center, 3/21.

FCNL Spring Lobby Weekend, 3/22-23.
- Micah Bales, Writer, Minister, Friends United Meeting
- Lt. Col. Daniel Davis, Army Lt. Col., Pentagon; 2012 Ridenhour Prize for Truth-Telling

Briefing: Alternative Vehicular Fuels, Energy & Environmental Studies Institute, 4/1.

Dr. Andrew Steer, *Climate Change with Economic Growth,* School of Advanced International Studies, 4/3.

Dr. Ken Orvis, *Of Humans and Planets*. William Penn House, 4/6.

Thomas Guevara, Economic Development Administration, US Department of Commerce, Workshop on the *Rainforest Blueprint,* 4/8.

Dr. Robert Musil, *Rachel Carson & Her Sisters*, Book Signing, 4/9.

Prof. Tom Picketty, *Wealth, Income and Inequality*, Center for American Progress, 4/15.

Urban Sustainability Lab, *Cities at the Center of the World*, Wilson Center, 4/22.
- Paul Amar, Associate Professor, Global and International Studies Program, University of California, Santa Barbara
- Desmond Arias, Associate Professor of Public Policy, George Mason University
- Gilberto Chona, Lead Specialist, Fiscal Policy and Urban Economics, Inter-American Development Bank
- Beth Chitekwe-Biti, Founding Director, Dialogue on Shelter, Zimbabwe Slum Dwellers International
- Ellen Hamilton, Lead Urban Specialist, Urban Development and Resilience Unit, World Bank
- Martin Murray, Professor of Urban Planning, Taubman College, University of Michigan
- Malini Ranganathan, Assistant Professor, School of International Service, American University
- Xuefei Ren, Associate Professor of Sociology and Global Urban Studies, Michigan State University
- Andrew Rudd, Urban Environment Officer, Urban Planning and Design Branch ,UN-Habitat
- Rashmi Sadana, Assistant Professor of Anthropology, George Mason University
- Kristin Scott Term, Assistant Professor of Integrative Studies, George Mason University

Darren Aronofsky, *"Noah" & the Nexus of Faith & Environmentalism*, Center for American Progress, 4/23.

Bruce Babbitt, *Attitudes Towards the Environment in the American West.* High Country News Reception, 4/23.

World Wildlife Fund, *Journey of the Universe: A Discussion and Film Screening*, 5/6.
Tom Dillon, Senior Vice President of Forest Programs at WWF
Dekila Chungyalpa, Director of Sacred Earth Program at WWF
Tom Lovejoy, Leading Climate & Conservation Scientist
Mary Evelyn Tucker and John Grim, Co-Directors, Yale Forum on Religion & Ecology

Professors Donald Woebbles and Gary Yohe, *Briefing: The National Climate Assessment*, Energy and Environmental Studies Institute, 5/8.

Appendix Three: Leverage Points

Attaining an ecologically integrated economy requires system change and transformation. This raises a question of strategy. Where are the leverage points? Donella Meadows' 1999 essay on "Places to Intervene in a System" provides an approach to this question.

She asks how can we change the structure of a system to produce more of what we want. Complex systems are counterintuitive. It is easy to push change in the wrong direction. Small changes in a system's leverage points can lead to large shifts in the system's trajectory. She offers the following advice.

Systems usually have big stabilizing *stocks* of stuff: changing the *flows* in or out creates modest incremental change, but doing so does not usually have a lot of leverage unless applied for a long period of time.

System *structures* are sometimes poorly built or incomplete: adding a missing element (e.g., a simple information flow), changing a response *delay* or increasing *signal accuracy* can increase efficiency, dampen fluctuations or improve responsiveness.

The *self-correcting capacity* of a system can be improved by adding counter-balancing *feedback* informed by timely and accurate monitoring of progress toward goals and objectives. Strong self-reinforcing feedback can create both exponential growth and rapid decline: system stability can be enhanced by lowering the *gain* on reinforcing loops or increasing it on counter-balancing loops.

Rules represent high leverage points. They define a system's range and limitations, its scope and boundaries, its degrees of freedom: to understand why a system is failing, examine the rules and who has power over them.

By changing system structures, some systems can become *self-organizing*: great leverage and increased *resilience* is added by system components that monitor variability and facilitate experimentation and learning.

Systems operate across *multiple scales* and have lower- and higher-level *goals*. Very high leverage is obtained by spreading a general understanding of who controls the goals and the means for changing the goals. The abuse of knowledge, information control, repetition and obfuscation are powerful elements of goal control. Open participation, analysis, articulation and leadership can change goals to be more in concert with the challenges and opportunities of our times.

A prevailing paradigm and its alteration is a particularly powerful point of leverage. "A paradigm is the *mind-se*t out of which the system arises. … From them, from shared social agreements about the nature of reality, come system goals and information flows, feedbacks, stocks flows and everything else about systems" (Meadows, pp. 163). Questioning, critiquing and intervening at the level of a paradigm can completely transform system structure and function. Asking who wins, who looses and by what means reveals current paradigm structures. But doing so only slows or stops their continuing proliferation. Alternative views of a positive reality are needed to redirect and expand the ways that minds are set.

Reflecting her Buddha-like perspective, Meadows adds one final point of leverage, namely to transcend thinking in paradigms. This involves grasping our limited capacity to understand, letting go of 'not-knowing' and the fear it induces, "… to 'get' at a gut level that there are paradigms and to see that *that itself* is a paradigm and to regard that whole realization as devastatingly funny." After a good laugh, comes a sense of compassion for the dilemmas we face, the struggles we encounter and the delusions we entertain. It also predisposed joyful participation in the creative potential of emergent systems.