



SEEDS OF VIOLENCE, SEEDS OF HOPE
Exploring Economics
in an Ecological Context

Volume II: Exercises

Readings and Activities
for Friends' Reflection and Discernment

A Resource for the Friends Testimonies and Economics Project

Seeds of Violence, Seeds of Hope was produced by the Friends Testimonies and Economics (FTE), a joint project of the Earthcare Working Group (EWG) of Philadelphia Yearly Meeting, and Quaker Earthcare Witness (QEW). FTE was formed to raise awareness among Friends about current economic policies and institutions as they relate to Friends historic testimonies.

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(Please feel free to make copies of this resource, giving credit to the FTE project.)

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The materials in Volume II were developed or assembled by Ed Dreby and Margaret Mansfield for workshops at Chestnut Hill, Green Street, and Towanda monthly meetings in early 2005, and at the Friends General Conferences Gatherings of 2005 and 2006. The FTE Project thanks all those who participated for their contribution to the development of these materials

Purposes of the Friends Testimonies and Economics Project, and *Seeds of Violence, Seeds of Hope*

“Friends do not agree on economics” was the explanation several years ago for why economic policy was largely ignored at otherwise spirited and informed discussions at an FCNL annual meeting. Furthermore, public discourse about economics tends to be polarized around labels and slogans and clouded by abstract language. Yet, as you’ll discover through the articles and activities in this resource, an understanding of basic economic concepts is important to Friends efforts to promote peace, justice, and restoration of earth’s ecological integrity.

The Friends Testimonies and Economics (FTE) project seeks to engage Friends in

- learning more about current economic concepts, policies, and institutions as they relate to our historic testimonies in an ecological context, and
- supporting advocacy by Friends Committee on National Legislation (FCNL) and other Friends organizations for a comprehensive reformulation of U. S. economic policy.

We see this as essential if progress is to be made toward any enduring prevention of deadly conflict.

We intend this resource to serve three related purposes:

- to help individual Friends involve themselves with the purposes of the FTE project;
- to provide activities focusing on particular themes for use in adult religious education classes, discussion groups, or other settings; and
- to offer options of activities and readings for a more extended workshop or interactive course.

Organization of this Resource

Volume I contains a series of short, accessible articles. They provide an ecological and ethical context, describe fundamental economic concepts and established analytic orientations, and suggest avenues for working toward more ecologically integrated economic practices.

Volume II provides an outline of some key points presented in Volume I and provides a variety of experientially-oriented and conceptually-oriented activities that can be used separately or in combination with one another for interactive presentations and workshops. It has been our experience that many Friends do not fully grasp the nature of exponential growth or the way most modern money is created by the banking system. “The King and the Wiseman” and “Smithville’s Fabled Economic Growth” have been eye-openers for these Friends.

Volume III contains a series of articles that present particular viewpoints of individual Friends who have been involved with the FTE project, and of several others whose views seem important to include. They assume some familiarity with the concepts and terminology presented in Volume I.

About the FTE Project

Shortly after the events of September 11, 2001, both the Earthcare Working Group of Philadelphia Yearly Meeting and Quaker Earthcare Witness, through its project on National Legislation, began to focus on economics as an essential aspect of efforts to transform the human-earth relationship. This led to co-sponsoring the Gathering on Economics and Friends Testimonies at Pendle Hill in June, 2003.

The Gathering addressed a Letter to Friends with the following quotation that provides the project's foundation. It was also the impetus for a process that has led, through many interactive presentations in a variety of settings, to the production of this Resource.

We believe the human-earth relationship in all its aspects is inseparable from our relationship with the Divine. We are convinced that the current economic system should be of urgent concern to the Religious Society of Friends. It is intensifying economic and social inequities throughout the world, causing structural and physical violence, driving many species to extinction, and leading our own species to self-destruction. We urge all Friends to learn more about current economic policies and institutions as they relate to Friends historic testimonies, and to equip ourselves to work effectively for public policies that restore Earth's biological integrity and resilience, increase social equity, and strengthen communities.

— *from a Letter to Friends by a Gathering of Friends at Pendle Hill, 2003.*

The FTE project will now focus on

- identifying and equipping a group of committed Friends to provide workshops and interactive presentations and discussions
- finding interested Friends to arrange for opportunities in monthly meetings and churches, at yearly meeting sessions, and in other settings, to engage other Friends with the purposes of the project.

We believe that those who seek to lift up concerns about economics and Friends testimonies do not need to be experts, but do have an on-going responsibility to be as informed and prepared as possible. Working toward three aspects of preparation seems essential as ongoing tasks:

- a clear understanding of basic concepts, terminology, and established analytic orientations; and an ability to explain these in clear, accessible language to those with little prior knowledge or understanding;
- an ability to identify one's own opinions and points of view, and to explain them clearly in relation to the established analytic orientations; and
- an ability to listen carefully to others' opinions and points of view, and to relate these other viewpoints to those derived from the established orientations.

If you'd like to become involved with the concern about economics and Friends testimonies, either by leading sessions or arranging for them, please contact Ed Dreby.

Seeds of Violence, Seeds of Hope

Volume II: Exercises

SECTION 1

KEY POINTS

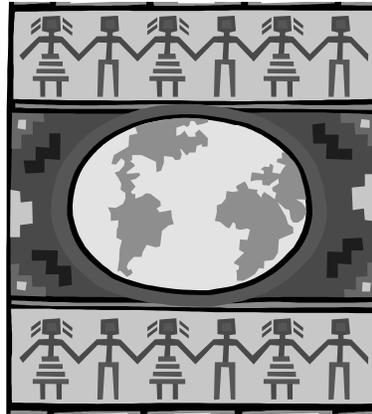
This section provides a summary of basic economic concepts and policy perspectives, some key points about the human-earth relationship and modern industrial economies, and some questions about current issues of particular relevance to Friends Testimonies.

SOME KEY POINTS ABOUT THE HUMAN-EARTH RELATIONSHIP

- The Earth is a materially closed physical system. Photosynthesis is basic to the self-renewing cycles and self-limiting processes of the biosphere.

- The reproductive capacity of living organisms entails an inherent potential for exponential population growth. This potential is counterbalanced by an inherent requirement to function in symbiotic relationships of a closed cycle character with all other elements of an ecosystem.

- Eco-system integrity occurs when changes introduced by any one species or circumstance is such that other species can adapt and the system as a whole tends toward increasing biological productivity, diversity, and resilience.
- Human economies are open systems, importing material resources from and exporting material wastes to the surrounding environment.
- As long as human numbers were relatively small and technologies were based on renewable resources, the earth could be realistically viewed as an infinite source for inputs and an infinite sink for outputs.
- Culture has enabled humans to transcend the limitations of specific habitats, though this frequently meant destroying the immediate environment and moving to a new location.
- Most human activity has, at some level, an ecological, economic, and spiritual dimension.



- In the 18th century, John Woolman's spiritual insight led him to perceive that accumulations of profit and privilege, which he described as "the seeds of great calamity," would lead over time to social and ecological disruption.

- The past two centuries have witnessed the physical expansion of the human enterprise with minimal consideration for ecological integrity. With no "empty places" left to settle humanity is confronting the limitations of the global habitat.

- In 1992, the Union of Concerned Scientists issued a "world scientists' warning to humanity" that "human activities are inflicting harsh and often irreversible damage on the environment and critical resources."
- Ecological footprint analysis indicates that modern industrial societies are using more resources from the earth's biologically productive land than the land is producing, so that the renewable potential of many resources is at risk.
- A "spaceship economy" must have different systemic features, expectations and incentives than a "cowboy economy." In particular:
 - ❖ preserving and enhancing the flow of resources from stocks of natural, social, and manufactured capital stocks must be a priority;
 - ❖ energy and material throughput is something to be minimized rather than maximized;
 - ❖ negative feedbacks, or "homeostatic mechanisms," need to prevent the overall variables of the system from going beyond ecological limits.

FEATURES OF MODERN INDUSTRIAL ECONOMIES

Economics Overview

As market-based industrial economies developed, so did the need to understand them. For this reason, markets have become a major focus of economics as a field of study.

Modern economics has two main branches:

Micro-economics focuses on specific markets and how they are affected by the interplay of choices made by consumers, producers, and governments.

Macro-economics focuses on understanding how these same choices determine the overall level of economic activity on regional, national and global scales.

Within the field of economics there are two main approaches:

Positive Analysis: the approach taken by most academic economists in the United States, uses scientific method to quantify as many interacting features as possible, and uses mathematical models to describe conditions and predict outcomes that match real-world experience. Positive analysis seeks to avoid dealing with ethical issues, such as those relating to the distribution of income and wealth. Many economists, especially those who practice positive micro-analysis, are of the view that economics is a science like physics.

Normative Analysis: uses theory and empirical findings, combined with perceptions and insights based on value judgments, to prescribe or advocate particular choices, usually related to public policy, including those related to the distribution of income and wealth. There is normative analysis in both micro and macro economics. Some economists view all economic activity to involve choices based on values, and thus all economics is normative, and, as a social science, more akin to sociology or political science than physics.

Basic Micro-Analysis

A market refers to the process by which buyers and sellers agree on prices for the goods and services they exchange. If there are many buyers and sellers, prices are only apt to be as high as is necessary to provide a fair return to the sellers, and the buyers receive fair value, i.e., the most they can reasonably expect of what they want for their money.

Ever since money came into use, there have been markets. In earlier times, markets were a small part of a larger economy; most decisions were made in households, villages, or by the decree of an authority. Markets became the basis for organizing economies as production began to take place outside of households rather than within them, and as households turned to

markets in order to earn money and to buy (rather than make) what they needed.

In a modern industrial economy there are a huge number of markets. It is important, if the society is to prosper, for markets to function well, that is, for exchanges at fair prices to keep taking place among businesses and households. In addition to markets for goods and services, there are markets for land, labor, savings, and a great many different kinds of financial investments.

Benefits of markets that function well because there are many informed buyers and sellers:

- **Voluntary exchange** in which all parties benefit,
- **Efficient allocation** of resources and labor to give consumers what they want, and
- **Increased productivity** of labor through specialization and innovation.

Market failures from the perspective of positive analysis, i.e. problems for society that markets cannot prevent, and that only can be addressed by public policy:

- **Excessive negative externalities** — negative externalities are costs to the wellbeing others



or the public at large that neither the buyer or seller pays for. Examples: pollution, sprawl, road-rage.

- **Insufficient public goods** — public goods are goods or services that everyone benefits from regardless of who pays for them. Examples: playgrounds, roads, public safety.
- **Excessive market concentration** — excessive market concentration occurs when one or a few buyers or sellers can eliminate or restrain competition and profit excessively. Result: higher prices, less choice.

There is a counter-intuitive aspect to market failures as defined by economists. A market failure is not to be confused with the failure of individuals or businesses to compete successfully in the marketplace. These are the losers that fully functioning markets create.

There is a counter-intuitive aspect to public goods as defined by economists. They are not necessarily provided by the public sector. A toll bridge is not a public good but a freeway is. A private library that does not charge a borrower's fee is a public good. A public campground that charges a camping fee is not a public good.

Normative problems associated with markets:

- **they promote materialism** — manipulative marketing, manufactured demand.
- **they create losers** — outsourcing, temp agencies, dying business districts.
- **they distribute income and wealth inequitably** — rural and urban poverty, medical and legal costs.
- **they generate economic sprawl** — strip malls, tropical deforestation, billboards, TV ads.

From both a positive and normative perspective, government has a responsibility, through public policy, to correct for market failures!

From a positive perspective, economists should advise policy-makers about causes and effects, but should not advocate.

From a normative perspective, economics is based on assumptions that make it impossible to separate analysis and advice from advocacy.

Money

What is it? ... a social convention/invention that provides a common basis for exchange in markets, simply because everyone is willing to accept money in exchange for everything else.



Money also serves as a “unit of account” to compare the value of different things, and as a “store of value,” which means that people can save it to use later or simply to accumulate.

Commodity money (like tobacco, grain, or pelts) has useful value in addition to its exchange value.

Token money (like paper bills and most coinage) only has value as a means of exchange.

Customary money (like cigarettes and bank checks) is created by the community of people who use it.

Fiat money is created by the decree of an authority, and becomes legal tender if specified by a legal system for paying fines and debts.

The value of money depends on

- a) the willingness of people to use it in exchange, and
- b) the amount of money that exists in relation to the volume of the goods and services that are being exchanged.

As long as there is a balance between the amount of money and the volume of exchange, the prices determined by markets will reflect the relative value of one good or service to another.

If more money enters the system relative to the volume of exchange, then over time prices will tend to rise and the value of the money will become less. This is what is meant by **inflation**.

If the balance between the amount of money and the volume of goods and services changes in the other direction, e.g., there is not enough money available for exchanging goods and services, then the level of economic activity is apt to decline, and theoretically prices will go down. This is one cause of a **recession**.

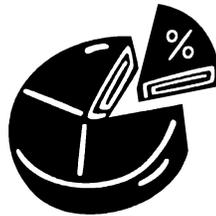
Fractional Reserve Banking

Most modern money takes the form of national currencies, but is actually created by banks when they make loans and enable the borrowers to write checks that the recipients then deposit into their own accounts.



Banks can do this because they know that most depositors leave their money in the bank most of the time and do business with checks. The banks only need to keep a fraction of the money deposited with them as a reserve to cover cash withdrawals (hence “fractional reserve”) and they use the rest to make loans on which they make a profit by charging interest.

Reserve ratio: this is the fraction, or percentage, of its deposits that a bank does not lend, but keeps available to cover withdrawals of deposits.



Reserve requirement: this is the fraction of deposits that a government requires the banks it charters to maintain as cash reserves.

Multiplier effect: this is the effect on the money supply when banks create new money in the form of new deposits, as checks based on bank loans circulate through the economy and are deposited in the banking system. (This process is sometimes called “deposit creation.”) There is also a reverse multiplier effect that reduces the money supply when loans are repaid unless new loans are made. In theory, the multiplier effect can be as high as the reciprocal of the reserve ratio/requirement.

Basic Macro-analysis

Macro-analysis originated in the theories developed by British economist John Maynard Keynes to explain the causes and characteristics of the Great Depression. Its goals are to minimize both unemployment and inflation. Keynesian macro-analysis initially served to guide government policy. Positive and normative analyses were differentiated later, when mathematical models became predominant.



Keynes clarified two systemic features about market economies:

1) There are **positive feedbacks in markets and the monetary system** that are apt to amplify the effects of small changes in the level of economic activity:

- trends toward the concentration of market share and wealth;
- relationships among production, employment, and new investment;
- the creation of money by fractional reserve banking, and the multiplier effect; and
- the nature of speculative financial markets.

2) There is an **essential relationship** between *savings* and *investment*:

- Investment is savings used for the production of new capital. Prosperity requires that savings be fully utilized by borrowing for new investment or for consumption.
- The ***Propensities to Save and to Spend*** are affected by income. As income increases, the percentage of income that is saved is apt to increase, and thus the level of investment must also increase if prosperity is to be sustained.
- Economic depression can result from ***insufficient demand*** due to ***maldistribution of wealth***.

If the wealthy become wealthier and the poor poorer, new investment resulting from the desire of wealthy people to earn a return on their savings can increase the production of goods and services beyond the point that poorer people can afford or wealthy people are willing to buy them. Market activity declines, and positive feedbacks may lead to a recession or depression.

Four Macro-Economic Policy Orientations

Neo-Keynesian orientation: Activist government should use fiscal and monetary policy as a *countervailing force* to maintain prosperity by promoting full employment and moderate growth.

- If employment and private sector spending is too low, the government should decrease taxes to increase private spending, and increase government debt so as to increase government spending.
- If there is already full employment and private sector spending is high enough to cause inflation, government should reduce its spending and raise taxes to moderate overall spending, which also reduces government debt.
- Monetary policy should give priority to promoting high employment through lower interest rates.

Neo-Liberal orientation: Minimalist government should limit its role to providing for a stable money supply and set tax and spending policies on the basis of its legitimate and limited needs because:

- government intervention is too cumbersome to be timely,
- cutting taxes is always easier than raising them, and
- government intervention leads to larger, less efficient, and more intrusive government.

Neo-Marxist orientation: Activist government must intervene to provide:

- rational oversight of private investment, and public investment in science and technology to assure that the general welfare takes priority over profit-seeking, and to prevent recurring crises; and
- fiscal and regulatory policies that enable everyone to meet basic needs for food, shelter, health care, education, useful employment, safe working conditions, and income security.



This orientation sees an underlying *dynamic of exploitation* in market economies because wealth accumulates and is used to increase the profitability of capital by minimizing regulations and taxes of any kind, and by keeping the number of workers employed, and the wages and benefits paid, as low as possible.

Ecological orientation: The economy as a whole must be restructured to assure:

- major investments in restoring and increasing natural capital;
- including as a *cost* of using non-renewable resources the development of renewable substitutes; and
- market mechanisms with negative feedbacks to maintain sustainable limits to throughput.

This orientation focuses on the role of *natural capital* in sustaining all economic production, and the failure of conventional economics to account for the full costs of goods and services because it treats the depletion of natural and social capital, and expenditures to correct for market failures, as income rather than as expenses.

The logical conclusions of ecologically oriented analysis are that

- the physical expansion of human economies will sooner or later end;
- renewable throughput must not exceed the earth's sustainable yield and restorative capacities;
- non-renewable throughput must be minimized;
- energy throughput must come primarily from current solar input;
- the concepts of capital, efficiency, and productivity, must be reformulated to reflect earth process; and
- economic and social incentives must restore, protect, and enhance the earth's biological productivity.

To date, this view has received greater support from non-economists than from economists.

Changes in the Global Financial Architecture

Before 1971: Under the 1944 Bretton Woods agreements, the U.S. dollar served as the currency of international trade, based on an international exchange rate of \$35 per gold ounce that was backed by U.S. gold reserves. All other currencies were valued in relationship to the U.S. dollar.

The U.S. money supply was managed by the Federal Reserve Bank (the “Fed”) using three basic tools:

- “open market operations” — the buying and selling of government bonds;
- changing “the federal funds rate” — the interest rate the Fed charges on loans to member banks; and
- changing “the reserve requirement” — the ratio of total deposits banks are required to keep on deposit with the Fed and as a cash reserve in the bank.

The Federal Deposit Insurance Corporation protected banks from “runs” by depositors.

The central banks of other nations used similar tools to manage their money supplies in order to maintain the value of their currencies in relation to the US dollar. The effect was global monetary stability. Over time, however, as the global economy expanded, more dollars accumulated outside the US than the federal government could redeem with its limited supply of gold. In the 1960s, the US Treasury faced a series of crises in the form of possible “runs” on the US gold supply.

Since 1971: The values of all currencies relative to each other have been determined by global currency exchange markets, and the global money supply is no longer tied to a limited supply of gold. This is because the U.S. government decided in 1971 that it would no longer exchange dollars for gold. It means there is no longer any physical restraint to prevent the global money supply from expanding as a result of borrowing for new investment, corporate consolidation, or financial speculation.

Beginning in 1973, mathematical formulas were developed and used to assess investment



risk and balance risk against value and earnings for financial investments, so that:

- many investment decisions began to be made by computer programs instead of by traders' intuitive judgments, and
- options markets, futures markets in money and interest rates, and various derivative financial products representing claims on claims on future wealth increasingly dominate global financial markets.

Beginning in 1981, electronic transactions made it:

- easier “to move \$1 billion (or \$1 trillion) from NYC to Tokyo than to move a shipment of lettuce...”; and
- possible to make large profits from arbitrage — the simultaneous buying and selling of huge quantities of the same thing on different exchanges.

Since the 1980s: As a result of banking deregulation and the expansion of subsidiary and off-shore banks:

- central banks are less able to manage the global money supply,
- investors can move huge amounts of money among the economies of different nations, and
- there is no physical limit on the total amount of money the system can generate.

The outcomes by the early 1990s, were that:

- The global financial economy increased from about twice the size of the real global economy in 1970 to between 20 and 50 times the size of the real economy.
- More than \$800 billion was traded every day, of which about \$25 billion was for trade in goods and services, and \$725 billion was for trade of financial instruments.
- Only about half of the trade in financial instruments was for stocks and bonds; the rest was for options, futures, and various derivative products.

It has been estimated that the global money supply increased at least 10 times during the 1990s, and also that it has become increasingly volatile, meaning that it is constantly increasing and decreasing by increasingly large amounts.

Unbundling the Components of Modern Industrial Economies



Every nation's economic institutions and policies are distinctive and constantly changing.

They vary in the way that several different kinds of decisions are made.

How much labor, capital, and resources from land are used to produce how much of what kinds of goods and services?

These decisions are determined by the interactions among:

- 1) markets, i.e., by voluntary exchange;
- 2) intentional economic planning, i.e., by public agencies, domestic and international non-governmental organizations, and even by corporate organizations; and
- 3) unintended side-effects of other societal decisions, i.e., by an executive, legislative, judicial, or non-governmental actions for other reasons to which the economy adjusts.

Who owns and profits from the society's natural, manufactured, and financial capital?

Five forms can be readily distinguished:

- 1) Private individuals or partnerships,
- 2) Limited liability corporations and their shareholders,
- 3) Cooperatives and their members,
- 4) Publicly owned and not-for-profit corporations, and
- 5) Governments.

How is money created and managed?

Three ways, among others, can be distinguished:

- 1) Money is created, and the supply is determined, directly by governments;
- 2) Money is created by debt through the banking system, and the supply is managed through a central bank (in the US it is called the Federal Reserve System); and
- 3) Money is created in communities, by custom (which is undoubtedly how money originated), or by design as is now occurring in many places with the development of local currencies.

How are decisions made about the economy's legal framework and management?

These can be made at different levels, in different ways, and for different purposes, as in:

- at the community, regional, national, or global level;
- by executive, administrative, judicial, legislative or electoral process;
- based on priorities involving considerations such as:
 - a) interests of financial investors, producers, employees, consumers;
 - b) differences in income, age, and responsibility; and
 - c) protection of public health, communities, and the environment.

By identifying these elements and the complexity within them, we unbundle a whole set of separate considerations. These often come wrapped in a single quasi-ideological package, which does little to promote understanding of the way a system actually works, or how markets might be changed to function differently.

What is not clear in the context of today's global financial architecture is to what extent national governments are able to shape their nation's policies, and to what extent governments are constrained by the ability of investors to move money wherever they think that can make the greatest profit. ♦

SOME KEY POINTS ABOUT MODERN INDUSTRIAL ECONOMICS

- Industrial economies have developed in the context of a steadily increasing use of energy and material resources, and their institutions have evolved to advance this trend.

- Every modern economy has its own distinctive and dynamic ways of using markets, regulations, and planning to allocate resources; of creating and managing money; of balancing private and public ownership of property; and of providing economic governance.

- An ideal market allocates resources from land, labor, and capital efficiently in response to consumer demand, and tends to promote increased labor productivity and to stimulate technological innovation.

- Most economists are clear that public policy is essential for purposes that markets cannot serve, which include preventing excessive market concentration, restraining negative externalities, and providing public goods.

- The use of household and business savings for investment by businesses, and for consumption by other households, tends to increase the level of economic activity. In current circumstances, sustaining a given level of economic activity is highly unlikely. Unless savings are borrowed for investment or consumption, so that economic activity increases, there is apt to be a reduction in the level of economic activity, with all the hardship that would entail.

- While there is little agreement about what the policies of government should be, there is widespread agreement that actions of government are important factors in the overall level of production, consumption, and investment, and how income and wealth are distributed within a society.

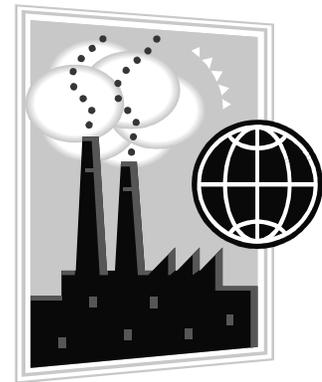
- Fractional reserve banking expands or contracts the money supply as more or fewer funds are borrowed to invest in the production and distribution of goods and services.

- All industrialized nations recognize the need for a central bank to help provide stability in an otherwise volatile private banking system.

- Ecological footprint analysis suggests that modern industrial societies are currently exceeding the earth's sustainable yield of energy and material resources. It is not clear how their economies can best adapt to the reality that continuous economic growth is not ecologically sustainable.

- To function within the earth's sustainable yield a society and economy must be organized to protect and enhance the earth's biological productivity, to prevent excessive use of energy and material resources, and to meet the basic needs of all its members in order to prevent ecologically disruptive activities by desperate people.

- It is not clear how modern industrial economies can best adapt to the reality that continuing to increase the use of energy and material resources is not ecologically sustainable.



CHALLENGES AND OPPORTUNITIES FOR FRIENDS

United States Political Beliefs and Friends Testimonies

The United States' Declaration of Independence was provoked by perceived abuses of



power. It asserts that there are God-given rights to life and liberty to which everyone everywhere has equal claim. Our political mythology holds that if government is of the people, it will also be by the people, and for the people.

Friends testimonies likewise place high value on both freedom and equality (though in a different context), and Friends process is based on faith in corporate inspiration and wisdom to test and season individual leadings.

However, in our experience of governance, corruption often accompanies those who pursue and possess power, and the values of freedom and equality tend to conflict with one another — frequently in a “cowboy” economy, even on the frontier; but especially in a “spaceship” economy.

Differing views of the relative importance of equality and freedom, and of where corruption is the greatest problem, underlie many differences of opinion about economics and public policy.

What do we mean by the values of freedom? Liberty? Justice? Equality? How in our own minds, hearts, and souls do we decide what is right when these values conflict with one another?

What does corruption mean to us? When does it pose the greatest dangers? Which is the larger problem: corruption in government or corruption in business? What kinds of checks and balances are needed to prevent abuses of power in our times?

* * *

Structural Violence: Definitions and Characteristics

In a social context, structural violence is that which causes physical and psychic harm to people because of the way economic, political, and social institutions are structured.

Characteristics of structural violence:

- *Hidden* — in bureaucracies and fine print.
- *Short-sighted* — ignores long term social costs for short term systemic benefits.
- *Self-reinforcing* — lots of positive feedbacks, few negative feedbacks.
- *Promotes scape-goating* — blames the victim or perpetrator, ignores systemic design.



In an ecological context, structural violence is that which damages the earth's biotic integrity and productivity because of the way economic, political and social institutions are structured.

Principles for More Ecologically Sustainable Economies

Ecological requirements:

- prevent the accumulation of disruptive substances in the biosphere;
- restrain the amount of land that humans appropriate; and
- limit the use of energy and material resources to the earth's sustainable yield.



Economic requirements of allocation and scale:

- redefine *productivity*: getting the greatest benefit from the least use of material resources;
- redefine *efficiency*: getting the most useful work from the least use of energy;
- invest in maintaining all existing capital stocks, with a priority on natural, human, and social capital; and
- include as a cost of using any non-renewable resources the development of renewable substitutes.

Economic requirements of distribution:

- provide people everywhere with
 - ◊ bodily integrity including basic health care,
 - ◊ adequate subsistence;
 - ◊ education, civil liberties and legal equality;
- prevent claims on real wealth from increasing throughput beyond sustainable limits.

An Opportunity

Friends concerned about societal transformation of the human-earth relationship might consider engaging Friends Committee on National Legislation.



They might ask the FCNL Policy Committee to consider including in FCNL's Legislative Policy Statement reference to some of these approaches to systematically reduce excessive and damaging consumption:

- increasing taxes on unsustainable activities, and reducing taxes on more sustainable activities without changing the overall level of taxation;
- eliminating subsidies on unsustainable activities and increasing subsidies for more sustainable activities at a net reduction of government spending;
- strengthening social and environmental criteria for government purchasing; and
- advocating for regulatory measures that let markets determine the means by which pollution will be reduced.

Each of these measures is already being used successfully to some degree in one or more industrial economies.

Challenges Related to Global Trade and Investment

Unbundling the components of trade negotiations: Traditionally, the economic doctrine of free trade called for ending taxes on imported goods so that markets would determine where particular goods could be most efficiently produced to everyone's benefits. Trade negotiations within the World Trade Organization (WTO), and those that are occurring regionally like NAFTA and CAFTA (North American and Central American Free Trade Agreements), involve a much larger agenda which includes:

- lowering barriers to the trade of goods between nations by
 - ◊ lowering export and import taxes,
 - ◊ exempting imported goods from regulatory requirements of domestic production, and
 - ◊ preventing preferential or punitive treatment of any nation's products based on considerations of how they are produced;
- protecting foreign investors from regulatory interference by governments in
 - ◊ what they are allowed to invest in,
 - ◊ what they can buy and sell,
 - ◊ who they can hire, and
 - ◊ preserving the value of their investment;
- lowering barriers to the out-sourcing of services, for example:
 - ◊ financial services,
 - ◊ data processing services,
 - ◊ water delivery and waste management services,
 - ◊ education and health services, and
 - ◊ tourism services;
- extending patent protection from the national to global level for products such as:
 - ◊ seeds,
 - ◊ medicines, and
 - ◊ genetically modified organisms (GMOs); and
- establishing the ability of corporations to sue governments over the interpretation of trade agreements through procedures created by trade agreements.

Efforts to include a Multilateral Agreement on Investments under the WTO have been removed from its agenda, at least for the time being. How negotiations to modify the current global financial architecture might occur and whose interests they would be apt to serve is therefore an open question.



Questions about global trade and finance:

Should a government be able to:

- legally discriminate among imported products based upon how or where the product is produced? Or should any discrimination be based solely on the product's physical characteristics?
- set requirements for companies owned by foreign investors about who they hire, where they buy their inputs, and where they sell their products? Or should the companies be able to make these decisions based solely on market considerations?
- place restrictions on where services are performed, and who owns and who regulates the companies that provide them? Or should these decisions be made by companies based solely on market considerations?
- limit the flow of money into and/or out of its economy? Or should decisions about where money is invested be made solely on the basis of market considerations?

Should a government be required to:

- enforce patents granted by other nations, including:
 - ◊ medicines based on or derived from knowledge of indigenous cultures?
 - ◊ patented seeds by preventing farmers' use of seed harvested from plants they grow?
 - ◊ genetically modified organisms (GMOs) by not interfering with their sale in local markets?
- change laws and/or pay fines to corporations based on decisions about the interpretation of the trade agreements by the WTO or other bodies created by trade agreements?

Ecological considerations:

- How can the global commons be protected if trade agreements restrain governments from

placing restrictions on private ownership and profit-seeking?

- How can greenhouse gas emissions be reduced if global trade and travel continue to increase?

Tools: Cost-benefit analysis is one of the micro-economists' most useful tools. Accounting for the stocks and flows of natural and social capital is one of the key recommendations of ecological economics.

Would cost-benefit analysis based on rigorous full-cost accounting assist in developing political agreement about the relative benefits of global integration with those of regional self-determination for various products and services? For example, if prices were to include all the costs associated with the use of fossil fuels, would there be more political grounds for letting markets determine when international trade is truly advantageous?

**Challenges Related to
"Cowboy" and "Spaceship" Economics**

How can the productivity of labor be increased without increasing the number of unemployed people?



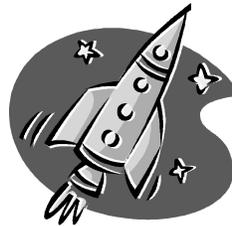
How can the ecological and social costs of goods and services be included in prices without increasing the cost of living for everyone?

How can a dollar amount be put on the ecological cost of adding more carbon to the atmosphere? Should the cost of the carbon be related to the source of the carbon?

If savings at 3% interest double within 25 years, where will the goods and services come

from that twice as much money will buy? At what costs to whom? What if everyone has savings on which they earn 3% interest?

How much food and water should everyone have a right to receive? A right to buy?



What must we give up to keep what we value most?

These are partly questions of ethics and partly questions of design. In the context of our existing institutions and expectations, they may seem insoluble. But institutions and expectations are fluid, and ideas are being proposed that

respond to many of these questions through redesign of the institutional framework within which markets function. ♦

How can Friends participate in reconciling seemingly stark differences about the purposes our society's economy should serve?

How can we find openings to help transform economic expectations and institutions to reflect a more ecologically oriented understanding of the human-earth relationship?

**Economic Trends Related to
Friends Testimonies**

Peace

- Beginning in the 1970s, new technologies and government policies have transformed the global industrial and financial architecture.

- Positive feedbacks from profit-seeking have created new types of investments, and have increased the size and instability of the global financial economy.

Integrity

Simplicity

- There is much controversy about how the current industrial and financial architecture affects:
 - ◇ distribution of wealth and power within and between nations, and
 - ◇ alteration of the earth's physical characteristics by human uses of energy and material resources.

- Some people think that modern economies will adapt to ecological limitations through the interaction of markets and government policies. Others think that a “miraculous” transformation of the human-earth economic relationship is both necessary and possible. ◆

Equality

**Query: How can Friends engage with others
in ways that help discern God's will for us
at this critical stage in Earth's history?**

Seeds of Violence, Seeds of Hope

Volume II: Exercises

SECTION 2

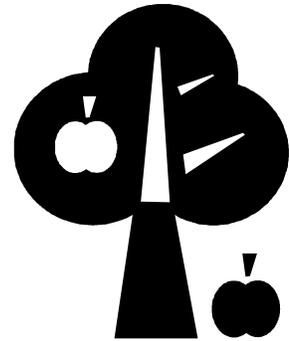
EXPERIENTIALLY-ORIENTED EXERCISES

This section consists of exercises and activities that deal with some of the ethical issues relating to Friends Testimonies and economics that are described in Volume I and in Section 1 of Volume II. It has been our experience that many Friends do not fully grasp the nature of exponential growth. “The King and the Wiseman” has been an eye-opener for these Friends.

QUOTATIONS AND QUERIES FOR WORSHIP

“The man has become like one of us, knowing good and evil. What if he now reaches out his hand and takes fruit from the tree of life also and lives forever?” So the Lord God drove him out of the garden.

— Genesis 3:22



Are we taking fruit from the tree of life?

What do we really know of good and evil?

How does our faith center us?

In what ways are our perceptions and values ethnocentric? anthropocentric? biocentric?



He has showed you, O Man, what is good; and what does the Lord require of you but to do justice, and to love kindness and to walk humbly with your God.

— Micah 6:8

Ask and it will be given you. Seek, and you will find. Knock, and it will be opened to you.

— Matthew 6:7

The Pain and Hope of Integrity and Faithfulness

A paraphrase of Thomas Berry:

Environmentalists tend to blame environmental problems on evil people. There will always be evil people. But our environmental problems are mainly caused by a lot of good and talented people doing what they are expected to do extremely well.

A paraphrase of Joanna Macy:

When we open ourselves to absorbing the damage and suffering of life's creatures caused by human societies, especially our own, the pain can seem overwhelming. But unless we are willing to experience that pain and live through and beyond it, we will be unable to do anything to take action at the level that is needed.

A paraphrase of John Cobb

No, I'm not optimistic. But I'm hopeful, because I believe in miracles. By miracles I do not mean that God will suspend the laws of physics to rescue us, but that human beings with God's help can to accomplish what seems to be impossible. We have witnessed many miracles of this sort in our lives, and we need a miracle. Our individual responsibility is to do whatever we can to help make a miracle possible.

A Story of Two Wolves

An elder Cherokee woman was teaching her grandchildren about life. She said to them:



A fight is going on inside me. It is a terrible fight between two wolves.

One wolf is fear, anger, envy and guilt, lies, arrogance, and greed.

The other is patience, humility, and gratitude, truthfulness, faith and compassion.

This same fight is going on inside you, and inside every other person too.



They thought about it for a minute, and then one child asked her grandmother, “Which one will win?”

The old Cherokee woman simply replied, “The one you feed.”

If you lend money to my people, to the poor among you, you shall not deal with them as a creditor; you shall not exact interest from them.

— Exodus 22:25



Then the man who had received the one talent came. “Master,” he said, “I knew that you are a hard man...so I was afraid and went out and hid your talent in the ground. See, here is what belongs to you.” His master replied, “You wicked lazy servant! You should have put the money on deposit with the bankers so that when I returned I would have received it back with interest. Take the talent from him and give it to the one who has ten talents. For everyone who has will be given more, and he will have an abundance. Whosoever does not have, even what he has will be taken from him.”

— Matthew 25:24-29



Render therefore unto Caesar the things that are Caesar’s and unto God the things that are God’s.

— Matthew 22:21



Jesus said many things about money.

How do we relate Jesus’ teachings to our participation in markets?

As we consider the benefits and failures of markets in modern industrial economies, what is God’s? What is Caesar’s?



The Lord is my shepherd, I shall not want. He makes me lie down in green pastures and leads me beside still waters. He restores my soul and leads me in the right path. Even though I walk through a valley as dark as death I will fear no evil for Thou are with me.

— Psalm 23

What does the 23rd Psalm mean to us now? How can we nurture spiritual courage in our meetings and our lives?

He who finds his life will lose it. And he who loses his life for my sake will find it.

— Matthew 10:39

What must we give up to keep what we value most? What do we value most?

Lines from *The Naylor Sonnets* by Kenneth Boulding

There is a spirit which I feel, that delights to do no evil, nor to avenge any wrong,
but delights to endure all things in hope to enjoy its own in the end.

— James Naylor, 1660

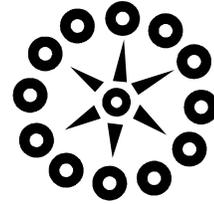
Must we be hard as stone? It wears to dust
As stiff as oaks? But they untimely break.
As pitiless as steel? It turns to rust,
And Time from Pyramids will ruins make.
In violence, decay, starvation, need,
What can endure? Only the living Seed.
(from IV)

We know not how the day is to be born,
Whether in clouds of glory, tongues of flame,
As once at Pentacost the Spirit came,
Or whether imperceptibly as dawn.
But as the seed must grow into the tree
So life is love, and love the end must be.
(from V)

GETTING STARTED

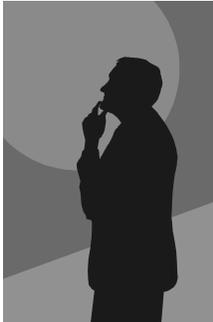
Suggestions for an Initial Exploration in Monthly Meetings

The 30 Friends, from 20 monthly and 11 yearly meetings, who participated in a Gathering on Economics and Friends Testimonies, held at Pendle Hill in June, 2003, asked Friends to consider these questions:



- ☀ In light of Friends' Testimonies, what is God calling us to do about the continuing and increasing marginalization of so much of the world's population, the extinction of species, and other environmental degradation?
- ☀ How do we integrate our human community within the natural world so as to provide for the physical and spiritual needs of future generations?
- ☀ What changes in the institutions of economy and governance are needed to promote effective stewardship of the natural environment and caring for people and communities?
- ☀ What is it in nature and human knowledge that we have the right to own?
- ☀ How best can we promote the values expressed in the Universal Declaration of Human Rights and the Earth Charter?
- ☀ How can we promote understanding and awareness of the consequences of increasing global interconnectedness and the urgency of addressing the dangers and opportunities that these present?
- ☀ As we earn, spend, and invest money, as individuals and as meeting communities, how can we live in the "virtue of that life and power" that leads us to treat all humans and the Earth as a manifestation of the Divine?
- ☀ Are we aware of the true cost of our consumption? Do we take into account our concerns for social justice and ecological sustainability as we earn, spend, and invest money?

Questions for Reflection and Discussion



1) How do you respond to the concerns expressed in these questions about economics and Friends testimonies? In what ways do you share them? Not understand them? See things differently?

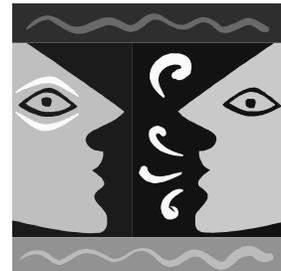
Reflect individually and then share in a circle or in trios or quartets

2) What conflicts between economic activities and human health do you see as high priorities for public policy? What conflicts between economic activities and the well-being of the earth's ecosystems concern you most?

Reflect individually, or brainstorm as a group, and then discuss how the conflicts are interrelated.

3) Which of these questions seems to you to be most important and useful for Friends as a faith community to consider? Why do you see this one (or these ones) as more important or useful than the others?

Share responses and use to form trios or quartets of individuals with similar priorities.



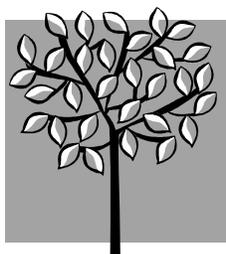
4) What aspects of economics and ecology do you and your Meeting community need to understand better in order to discern how to respond to environmental harms and economic injustices of particular concern to you? What do you see as the biggest obstacles to meeting this need for better understanding?

Discuss in small groups with similar priorities, then ask one person from each group to report.

5) How can we engage with one another and with others in ways that help us discern God's will for us about these concerns at this critical stage in Earth's history?

A possible focus for closing worship-sharing, and/or to refer to a committee or ad hoc group with a request to report with recommendations at a later time.

(Based on materials developed by Keith Helmuth and David Ross)



TREES AS METAPHORS for the Human-Earth Relationship



Purpose: To explore the relationships among our spiritual, ecological, and economic realities.

Spiritual Connections

Individual reflection:

Reconnect as fully as you can with a significant experience in which trees, or a tree, had an important role.



Then consider:

What was the spiritual dimension of this experience?

Preparation for sharing:

Describe the essence of your experience in a single sentence. Describe its spiritual dimensions in a single sentence.

Sharing in pairs, trios, or small groups:

What was your experience, and what were its spiritual dimensions? How do trees enrich our spiritual life? How do trees contribute to our religious literature and traditions?

Human Uses

Brainstorm as a group (list without discussion) as many different and varied ways as come to mind that humans make use of trees.



How are trees used in the arts? In our cultural traditions?

To what extent is the list based on our own cultural experience? How can the list be expanded by considering the uses of trees in other cultures and in other historical periods?

Ecological functions

Brainstorm the ecological role of trees in the ecosystems of which we are part.



How may the relationships between trees and hominids have shaped human evolution?

How may hominids have shaped the evolution of trees in the past? In the 20th century?

Trees and Industrial Economies

Consider the two graphs on page 127, “World Population 1650-Present” and “World Population Compared with U.S. Paper Consumption 1920-1990.”



Note: The second graph portrays multiples, since 1920, of world population and U.S. paper consumption beginning in 1920; i.e., 1920 = 1

Where do you see shifts in the rates of increase, and to what might they be attributed?

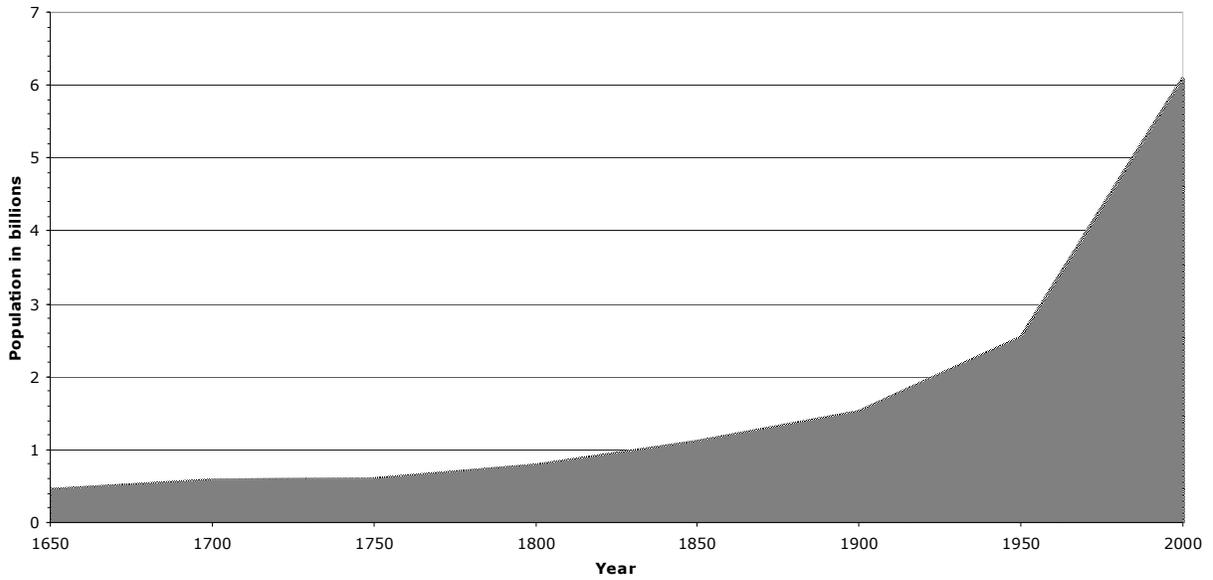
Note: The increase in U.S. paper consumption roughly corresponds to the increase in U. S. GDP.

List ways that the production and uses of paper affect the environment.

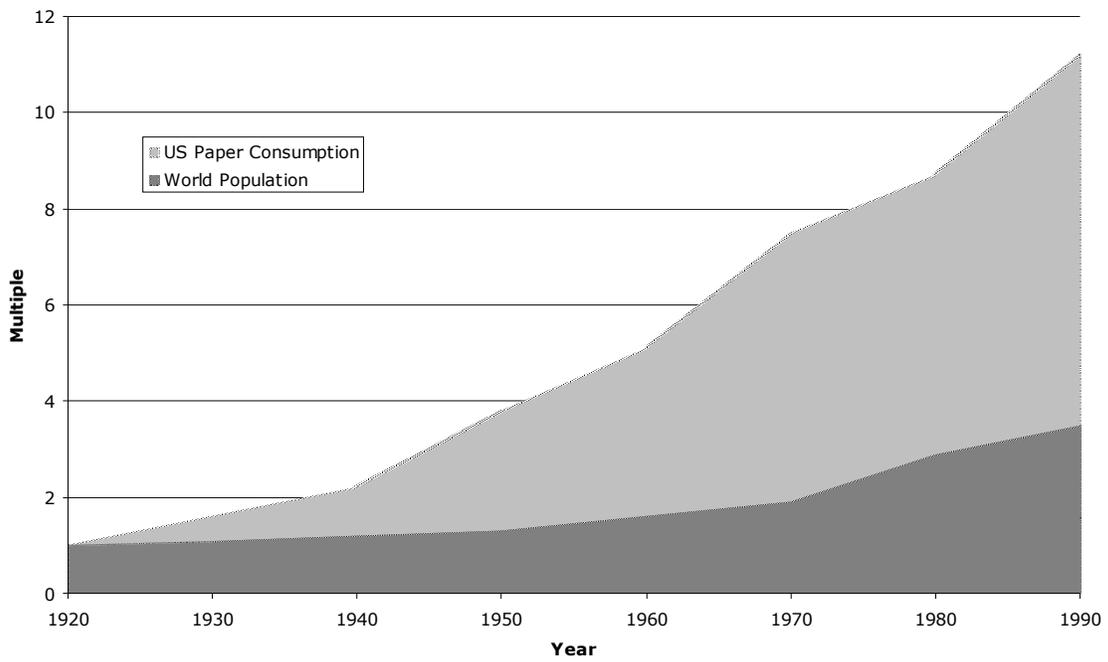
Consider the formula $I = P \times A \times T$ which says *Impact* on the environment is a function of *Population* — total human numbers, *Affluence* — average resource use per person, and *Technology* — the degree to which the technologies in use are ecologically disruptive (understanding that the purpose of the formula is to distinguish among several factors and not to suggest that it is possible to make precise calculations).

In what ways has each of these factors, *P*, *A*, and *T*, affected trees and forests? In what ways can human impacts on trees and forests be seen as a metaphor for the human-earth relationship?

World Population 1650-present



World Population compared with US Paper Consumption 1920-1990

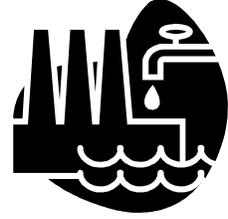


PRIORITIES FOR ENVIRONMENTAL PROTECTION

Purpose: To help participants explore their understandings of current environmental problems.

The American Environmental Trust, an organization (fictitious) that advocates for environmental protection at both the national and state levels, is conducting a survey of citizen-activists as part of a strategic planning process. It will help set policy priorities for the next five years in relation to what is

- a) most needed for long term environmental protection, and
- b) most achievable in terms of developing effective grassroots support for legislative advocacy through existing organizations.



Citizen-activists are defined as

- a) organizationally active in “target communities,” among which are faith-based organizations with policy statements related to environmental protection, and
- b) able to be persuaded to communicate with their legislators.

You have been asked to participate as a “citizen-activist” in the Society of Friends.



Please rank-order, from 1 (most important) to 12, the following issues:

- | | | | |
|--------------------------|------------------------------|--------------------------|-----------------------|
| <input type="checkbox"/> | acid rain | <input type="checkbox"/> | clean water |
| <input type="checkbox"/> | endangered species | <input type="checkbox"/> | farmland preservation |
| <input type="checkbox"/> | forest protection | <input type="checkbox"/> | global warming |
| <input type="checkbox"/> | nuclear wastes | <input type="checkbox"/> | pesticides |
| <input type="checkbox"/> | asthma/respiratory illnesses | <input type="checkbox"/> | sprawl |
| <input type="checkbox"/> | toxic chemicals | <input type="checkbox"/> | wetlands protection |

Is there another issue (or issues) that should appear on this list? What ranking would you give it?

What rationale have you used in your rank-ordering of these issues?

Questions for Discussion

How are groupings of two, three, or more of these issues related to one another?

Which are more focused on human health and well-being? Which are more focused on eco-system health and wellbeing?

How do particular issues affect the human-tree relationship?

Do we think of these issues as environmental problems or as ecological problems? How might considerations of the language we use affect the way issues are perceived?

ECOLOGICAL FOOTPRINT EXERCISE



Purpose:

To compare one lifestyle with another in terms of its demand for natural resources, and the demand of human lifestyles with the natural resources available to supply them.

Brief Explanation

William Rees and Mathis Wackernagel developed a way to estimate the amount of biologically productive land needed to support a particular lifestyle on a sustainable basis. This *ecological footprint* is calculated by quantifying the area needed to supply all of a lifestyle's demands using renewable resources: for food, energy, shelter, water, and waste disposal (including trees to sequester CO₂ from burning fossil fuel).

The earth currently has about 28.5 billion biologically productive acres. Using economic and other data, average "footprints" for numerous countries and cities can be calculated. (See Volume I, page 23 for more information.)

Preparation

- Using the Ecological Footprint Per Capita chart, prepare an index card for each exercise participant (plus a few more if the number is small).
- Use one card for "World Average," another for "Fair Share," and each of the remaining cards for a country. Include its name, useable acres, and footprint acres.
- Paper clip to each card enough scrap paper (8 ½ x 11 works well, or newspaper if you are using a very large space) to represent each acre and partial acre of the footprint.
- Distribute the cards. (With a small group, be sure to distribute the World Average, Fair Share, U.S., Japan, China, and Mozambique cards — persons given cards with small footprints can receive multiple cards.)

Average Per Capita Ecological Footprint in 1999 By Country (in Acres)

	<u>Footprint</u>	<u>Useable</u>
Argentina	7.5	16.5
Australia	18.7	36.1
Bangladesh	1.3	0.7
Brazil	5.9	14.9
Canada	21.8	35.2
Chile	7.7	10.5
China	3.8	2.6
Costa Rica	6.2	6.2
Egypt	3.7	1.9
Ethiopia	2.0	1.2
Germany	11.6	4.3
India	1.9	1.7
Indonesia	2.8	4.5
Israel	8.4	0.7
Japan	11.8	1.7
Jordan	4.7	0.3
Mexico	6.2	4.2
Mozambique	1.2	4.6
Nigeria	3.7	1.5
Philippines	2.9	1.4
Poland	9.1	4.0
Russia	11.1	12.0
South Africa	10.7	6.0
Sweden	16.6	18.1
UK	13.2	4.1
US	24.0	13.0
Venezuela	9.3	6.6
World Average	6.0	
World Fair Share		4.7

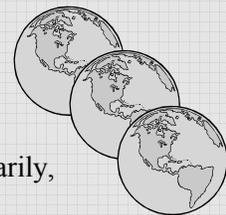
An Illustration of How Much Footprint Different Nations Are Using



- Explain that 1 sheet of paper = 1 acre. Ask participants to lay out the paper, edge to edge, to represent the “footprint” of the country card(s) they are given, and then to stand by it.
- Point to various participants, asking them to identify themselves by country and tell their footprint size.
- After the countries have been identified, ask “World Average” and “Fair Share” to identify themselves.
- Ask for observations and thoughts. If prompting is needed, ask:
 - ◇ What do you notice about the Fair Share versus the World Average?
 - ◇ Which countries use less than their available acreage? their Fair Share? Which are using more?
 - ◇ Why is the U.S. footprint so large?
 - ◇ What do our Quaker testimonies tell us about this situation?
 - ◇ What are some of the ways we can reduce our ecological footprint?

Key Points

- It would take about one and a quarter earth’s to sustain the existing human footprint, about two earths to sustain six billion people with an “industrialized” average footprint, and about three earths with an average U. S. footprint.
- The difference between the U. S. average and the industrialized average is primarily, though not entirely, due to the greater per person use of energy in the U.S.
- Differences in the size of footprints within nations is greater than the disparities between nations.
- As population or affluence increases, “World Average” increases and “Fair Share” decreases. As long as “World Average” exceeds “Fair Share,” the total amount of biologically productive land is apt to be reduced.



THE KING AND THE WISE MAN

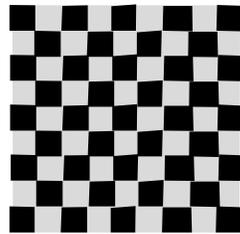
An Illustration of Exponential Growth



A simple example of exponential growth, and how it can surprise us even when we understand its possibilities, is

found in a story told of the ancient wise man who invented chess. The king was so pleased with the game that he wanted to reward the wise man handsomely, and asked him to choose anything in the kingdom he wanted.

The wise man knew the king's people were hungry and that the king was selfish, so he decided to trick the king to help the people. All he wanted, he said, was a grain of rice on the first square to be doubled on the second,



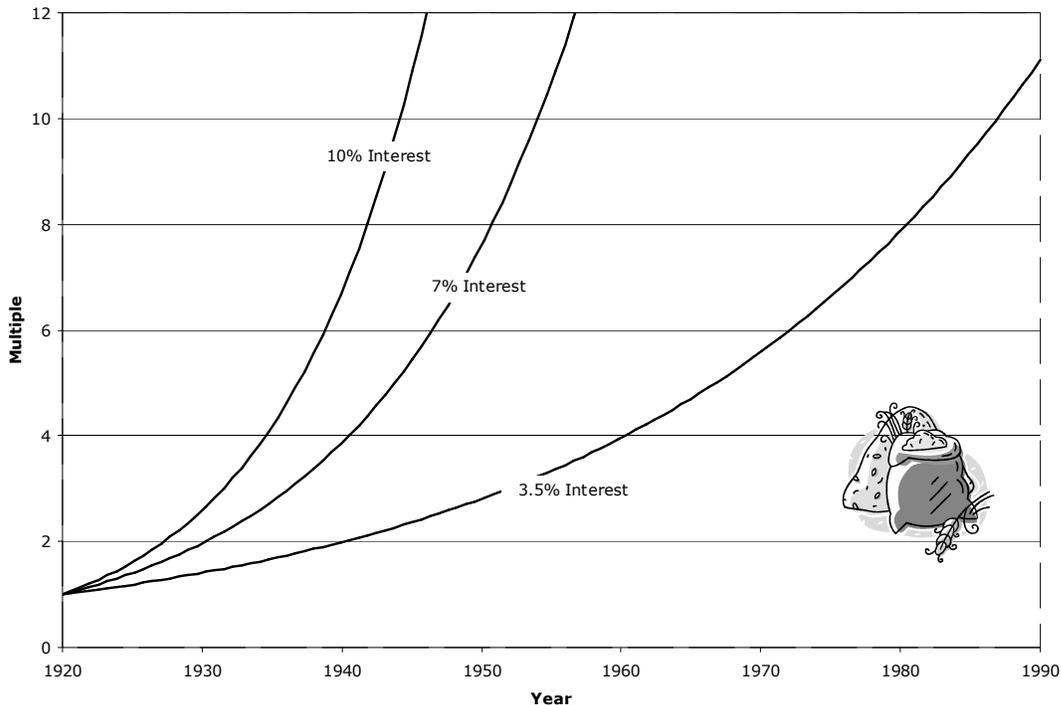
doubled again on the third, and so on for each square on the board. The king couldn't believe the wise man would ask for so little, so tried to get him to ask for something more.

But the wise man said he was offered whatever he wanted, this was all he wanted, and he knew the king was a man of his word. So the king ordered a servant to bring a basket of rice and to begin counting out the reward. In our illustration we use popcorn instead of rice. You are invited to guess what squares a 1 oz. medicine cup and a 1 pint container of popcorn would go on.



EXPECTATIONS BASED ON COMPOUND INTEREST

A quick rule of thumb for estimating how many years it takes for invested money receiving compound interest to double, then to double again, is to divide the rate of interest into 70.





At square 17, there would be a trash can full of more than 32,000 kernels.
At square 25, there would be more than 8,000,000 kernels.



The outcome was that all the king’s rice was given to the wise man long before the last square, and the wise man was able to use it to feed the people.

At square 64, there would be more than 10^{19} (that is, 10 quintillion or 10,000,000,000,000,000,000) corn kernels, filling at least 200 trillion 55 gallon barrels.

Preparation for and Discussion about *The King and the Wiseman*

- Materials needed:*
- Chessboard
 - Pint container full of unpopped popcorn
 - 1 oz medicine cup or 1/8 cup coffee scoop
 - Lid to pint container or similar lid



Set-up: Put chessboard on a table where people can gather to see it, fill the medicine cup with popcorn, and put some kernels in the lid. Put the medicine cup and pint container in the middle of the chessboard, and the lid to the side.

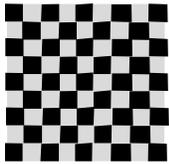


Illustration: Recruit a narrator, wise person and servant. You be the king. Ask narrator to read first two paragraphs. Ask wise person if s/he doesn’t want a palace or gold? Call her/him a “silly wise person.” Order the servant to begin counting kernels. Tell the servant to hurry up. Stop the servant in the middle of the 5th square, and ask people to guess which squares the medicine cup and pint container go on. (The medicine cup goes on square 9, the pint container on square 13.)

Key Points and Questions

Refer to “Expectations Based on Compound Interest” (previous page).

- See how large the numbers quickly become as reported at the top of the page.
- At 3½ %, how long does it take re-invested money to double? (20 yrs).
At 7%? (10 yrs).
At 10% ? (7 yrs).
- Refer to the information from “socially responsible” Pax World Fund. The fund’s performance since 1983 is such that if all earnings were reinvested, every \$1 invested in 1983 would now be \$3.
- What does this suggest that the effect of compound interest has on the distribution of wealth in the national and global economy? On the ecological damage caused by human activities?

PAX WORLD BALANCED FUND Average Annual Total Returns as of June 30, 2003	
1 year	3.07%
3 year average	2.66%
5 year average	4.18%
10 year average	9.59%
15 year average	10.17%
20 year average	10.40%

If the group has also explored “Trees as Metaphors” (see Volume I, page 23), refer to Three Population Explosions (next page).

- Note the difference in the years represented on the horizontal scale. Explain the difference in the vertical scale. The lower graph uses 1920 as a base (that is, 1920 values are “1,” and the scale as the number of times the quantity in 1920 has increased (or would increase) by that amount.
- The information about world population is the same in both graphs, that it increased 2.8 times from 1920 to 1990, but the curve is different because the scales are different.
- U.S. paper consumption has increased 11.2 times from 1920 to 1990 and it continues to increase. Note that the increase for savings earning $3\frac{1}{2}\%$ is about 12 times. This is very similar to the increase in paper consumption, and



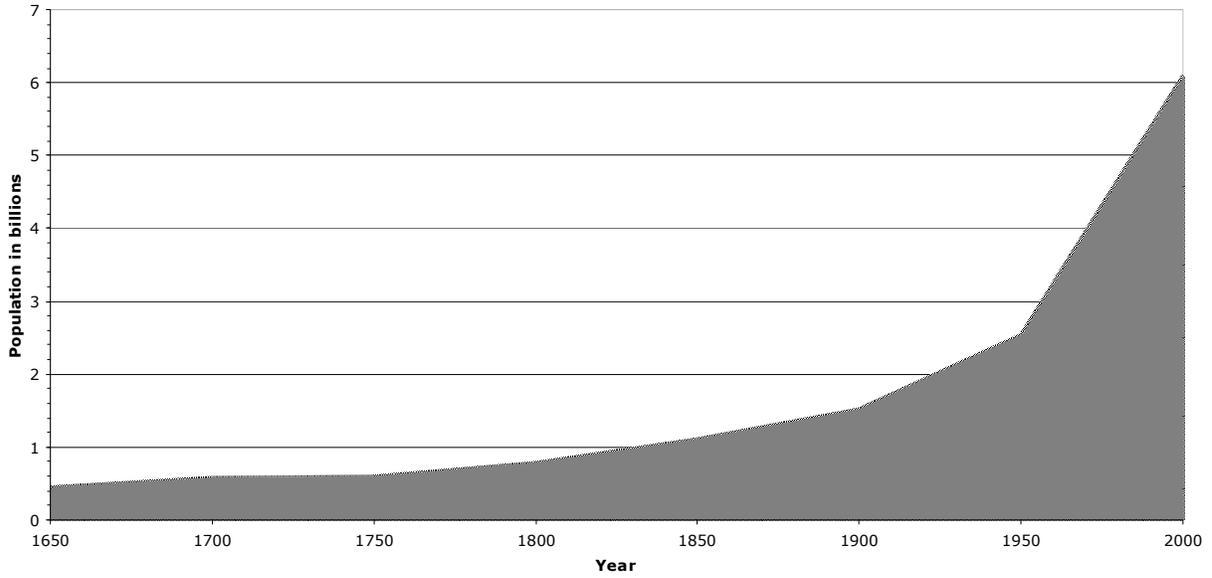
to the growth of US GDP. If the interest rate is higher, the growth in earnings is faster.

Many people recognize that the growth of the human population is a problem. Lots of people object to the pollution caused by the increase in machines (represented by paper production), but don't regard simply having more machines as a problem. Almost no one thinks of having more money as a problem. More money is generally seen as a good thing. Most of us think we need more money and want a high return on our savings.

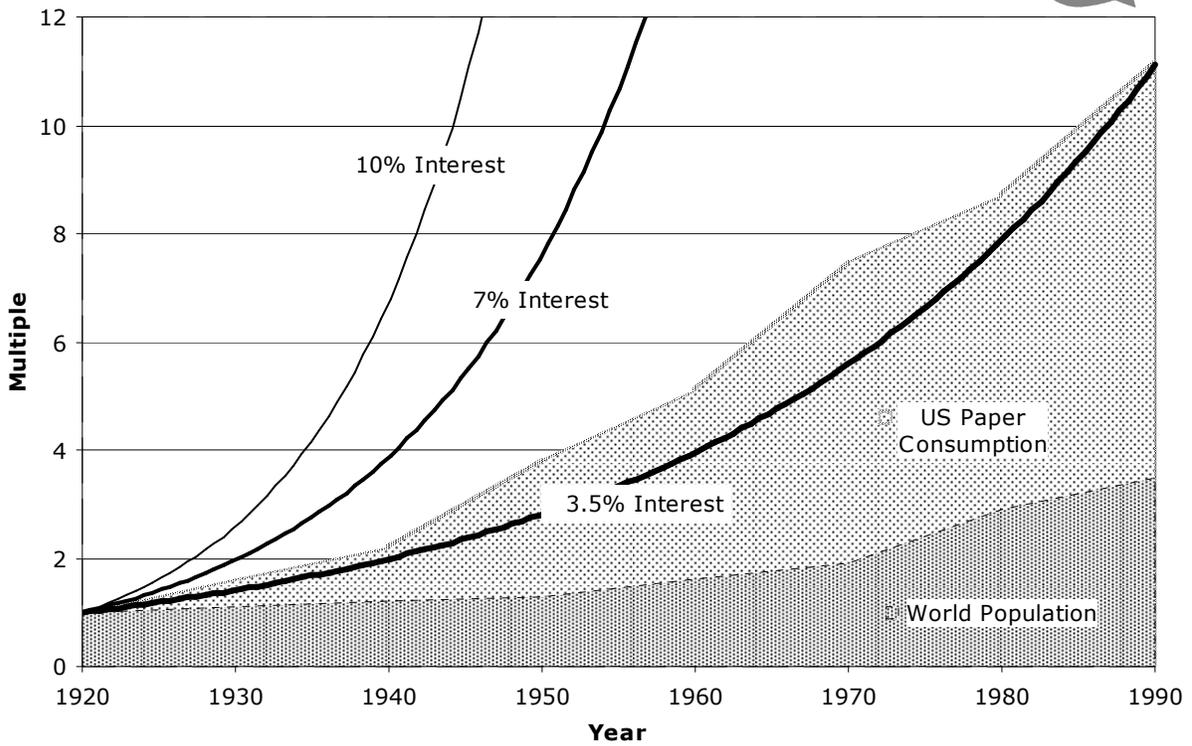
- What is apt to be the effect if a large number of people have savings that increase exponentially? When they decide to spend their savings, where will all the additional goods and services come from that they will then expect to be able to buy?
- How long can the total amount of savings invested at compound interest increase before the system becomes destabilized? How long can governments manage the system to keep it functioning without a major crisis? How big does a crisis have to be before it becomes major?
- How do Friends testimonies relate to this situation?

If people seem to be overwhelmed by these issues, you may want to reflect on the “Quotes” from Thomas Berry, Joanna Macy, and John Cobb in Volume I, page 25.

World Population 1650-present



Three Population Explosions:
Mouths, Machines, Money



ECONOMICS AND THE HEINTZ DILEMMA

Purpose: To illustrate ethical considerations that markets by themselves cannot address and that public policy can be used to incorporate into markets.

The Heintz Dilemma: This dilemma was designed by psychologist Lawrence Kohlberg to investigate the process of moral reasoning. But it can also be viewed as an illustration of the benefits and failures of markets.



In Europe, a woman was near death from cancer. One drug might save her, a form of radium that a druggist in the same town had recently discovered. The druggist was charging \$2000, ten times what it cost for the radium to make the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could get together only about \$1000. He told the druggist that his wife was dying and asked him to sell it cheaper or to let him pay later. But the druggist said no. The husband got desperate and broke into the man's store to steal the drug for his wife.

Should the husband have done that? Why or why not?

Reflections on Heintz and the Benefits and Failures of Markets

- Without the innovative spirit that markets help create, and the technological advances markets spur, there would have been no druggist working on a cure, and no cancer medicine for Heintz to buy or steal.
- The market won't induce the druggist to lower his price if he doesn't care about Heintz' wife, if he doesn't need money now, and if he thinks he can get a higher price at a later time.

The dilemma highlights two fundamental conflicts. One is the conflict between the needs of a society to maintain social order and the needs of individuals for the means of survival. The other is the conflict between the values of freedom and equality that the U.S. Declaration of Independence and the political mythology of the United States fail to recognize or resolve.

- No society can prosper in which individuals decide for themselves when they are going to take what they want from someone else.
- If a 1000% return on investment seems too high, society through government policy needs to address this as one of the ethical issues that markets do not and cannot address.

Is the Heintz dilemma purely hypothetical?

- If Heintz had an opportunity to make money to buy the drug for his wife, or to put food on the table for his family, by selling illegal drugs should he do it?
- If the druggist's brother was the police chief who used his force to keep Heintz from stealing the drug, wouldn't Heintz be tempted to burn the store down?

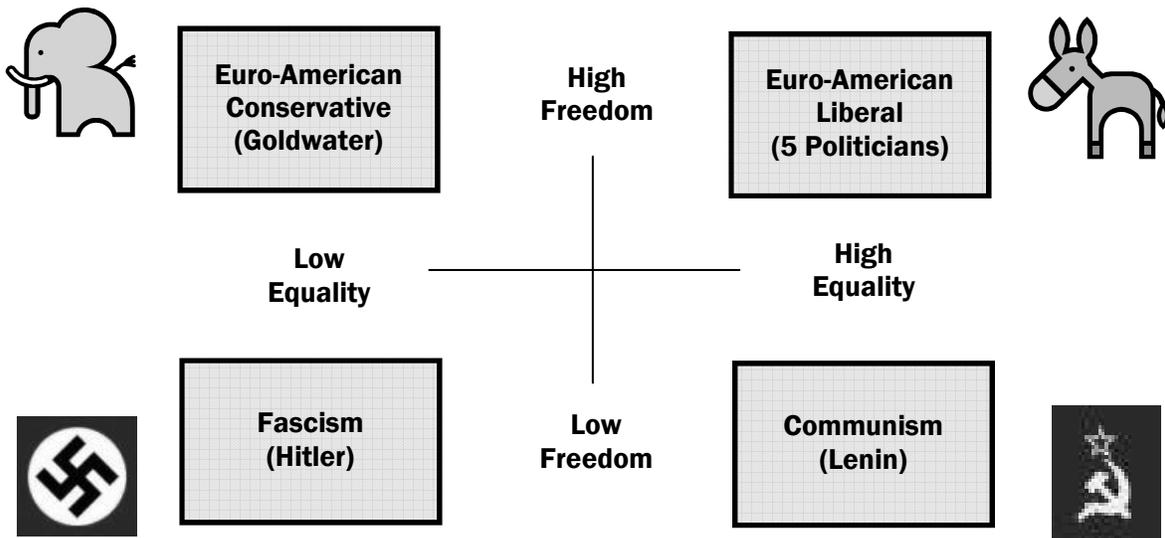
(See Volume I, pages 42-49.)

Freedom and Equality in Economics and Public Policy

Another psychologist, Milton Rokeach,* developed a values survey which asks people to rank order a list of eighteen terminal values (e.g., “a comfortable life,” “an exciting life,” “a sense of accomplishment”) and eighteen instrumental values (e.g., “ambitious,” “broadminded,” “capable”).

Rokeach found that political views could be predicted by the relative importance given to the values of “freedom, independence, free choice,” and “equality, brotherhood, equal opportunity for all.” He concluded that these are the most distinctively political of the terminal values, and that politics is the means by which a society negotiates its resolution of the conflict between freedom and equality in the sphere of economics.

He also analyzed the values in writings of Lenin, Hitler, Barry Goldwater, and five Euro-American liberal politicians of the 1960s. Hitler's writings had freedom and equality at the bottom. The liberals had these two values at the top. Lenin had equality first and freedom last. Goldwater has freedom first and equality last.



Rokeach cautions against drawing oversimplified conclusions by pointing out that freedom and equality mean different things to different people and that in the writings there were other differentiating values as well. Hitler, for example, ranked health high and wisdom low, while the others ranked wisdom high and ignored health or ranked it low.

The Heintz dilemma shows that, for those with advantages, unregulated markets maximize freedom and their ability to make money, and that public policy must provide for equality in the context of winners and losers that markets create.

How do Friends testimonies relate to individual and societal choices between “freedom” and “equality?”

* See Milton Rokeach, *The Nature of Human Values*, 1973, The Free Press

EQUALITY AND STRUCTURAL VIOLENCE



Purpose: To relate the concept of structural violence to personal experiences of prejudice and inequality and to the testimony on equality.

Worship-Sharing

Philadelphia
Yearly Meeting's
Queries
on Equality ask:

How does our Meeting help to create and maintain a society whose institutions recognize and do away with the inequalities rooted in patterns of prejudice and economic convenience?

The Query doesn't tell us what to do. It only asks us to describe what we are doing, and implies that we ought to be doing something to accomplish an ideal that is huge and a task that is ongoing.

In order to respond we must ask ourselves what the patterns are that we should be helping to do away with. Let us reflect on, and share in a worshipful context, something of our own experiencing and understanding of these patterns.

- What personal experiences stand out for you as examples of inequality rooted in patterns of prejudice and economic convenience?
- What was the context in which these experiences took place?
- What do you understand to have been the complexity of factors contributing to the kind of inequality you experienced?

(See Volume I, pages 20-22.)

Reflection and Discussion

FCNL has included “*addressing structural economic violence*” within its new legislative priorities. It may be useful to define structural violence as serious physical or psychic harm caused by the way social, economic and cultural institutions are structured. It may be helpful to note that advocates for racial justice distinguish between personal prejudice and structural racism.

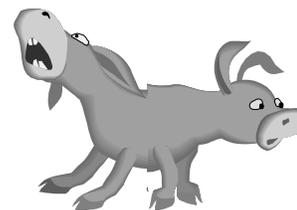


- At what point does inequality create sufficient physical or psychic harm to constitute structural violence?
- To what extent can the degree of harm be attributed to an individual's ability to cope with adversity rather than to inequalities and discrimination?
- How do patterns of inequalities due to personal and social prejudice influence and become influenced by the way institutions are structured?
- What kinds of inequalities are “facts of life”? Are there forms of structural violence that are inherent in the nature of human societies?
- How do we “experience” structural violence to those with whom we do not have direct contact in our community? Our nation? Other nations?
- How do we “experience” structural violence caused by U. S. domestic and foreign policy?
- At what point does the use of energy from sources that are destabilizing the global climate become a form of structural violence?
- How do concerns for equality and structural violence differ as the context shifts from a “cowboy” economy to a “spaceship” economy?

PUSH-ME-PULL-YOU

Purpose: To illustrate the effects of current economic incentives on efforts to reduce consumption.

Dr. Doolittle and the Push-Me-Pull-You There is an early 20th century children's story about Dr. Doolittle, who goes to Africa to help the animals there, and discovers the Push-Me-Pull-You, a gentle two-headed horse-like animal. In order to move forward in the direction of one head, it had to go backwards from the standpoint of the other head.



A Push-Me-Pull-You was therefore easy for the monkeys to capture because all they had to do was to frighten it so that it tried to run away in both directions at once and couldn't go anywhere. The Push-Me-Pull-You can perhaps be thought of as a metaphor for our society's efforts at environmental protection, one head wanting to protect the environment and the other wanting to grow the economy.

For example:

HYBRID PICKUPS ACT AS GENERATORS WITH CLEAN, FUEL-EFFICIENT ENGINES AUTO NEWS, July 28, 2004

By Mark Phelan, Free Press Auto Writer



Minutes after the lights went out (in the blackout of) Aug. 14, (2003) the phones started ringing at General Motors Corp.'s advanced-engineering building in Troy. Some of the automaker's top executives were scrambling to get

their hands on a pickup truck that used a gasoline-hybrid layout that could keep their refrigerators running through the hot, muggy weekend.

A 4.8-kilowatt generator and four 120-volt electric outlets suddenly made the Chevy Silverado and GMC Sierra hybrid full-size pickups the most desirable vehicles in a corporate fleet that includes some of the world's fastest and most luxurious cars. A few municipal governments bought the hybrid trucks earlier this year. They go on sale to the public next month.

The unique system allows the GM hybrids to provide 2,400 watts of continuous power for 32

hours on a tank of fuel, chief engineer Steve Poulos said. That's equivalent to the output of a small to midsize generator from a hardware store, he said, with the benefit that the sophisticated generator produces power with virtually no spikes, making it reliable enough to power delicate equipment like a laptop or personal computer. The Silverado hybrid is also quieter than most emergency generators and meets California's stringent standard for super-low emissions vehicles. The system's electronic controls shut the engine off before it runs out of fuel, leaving the owner with a couple of gallons in the tank to reach a gas station.

The hybrid option costs \$2,500. GM expects most of the hybrid V8-powered Silverado 1500s to sell for \$30,000 to \$33,000. GM has sold about 300 2004 hybrid-electric pickups to local governments in Dade County, Fla., Philadelphia and Maine. Those fleets chose the trucks for the 2 to 3 m.p.g. improvement in fuel economy and for the generator's ability to run power tools. GM will begin delivering the first 2005 hybrids to individual customers in August, just in time to power the patio lights at blackout anniversary parties.

Unintended Consequences

The hybrid Silverado utilizes a technology that was created to reduce energy use in order to manufacture and market a product that increases energy use. Keith Helmuth says that "simplicity is not enough" because our economy's institutions and incentives lead people to do bad things for good reasons. Our intentions are like the Push-Me-Pull-You, trying to go in two directions at the same time. But instead of being at a stand-still, the current system feeds the mouth that nourishes economic expansion.

Can you think of other examples in which markets have produced unintended consequences? In which efforts to reduce consumption have increased consumption?

How do Friends testimonies relate to this dilemma?

NECESSARY LOSSES

Purpose: To consider some of the challenges to our existing beliefs and values that are presented by the conflicts between our current economic and social expectations and the ecological realities of the human-earth relationship.

For Reflection, Sharing, and Discussion

Reconnect as fully as you can with an experience that illustrates Kenneth Boulding's perception that the earth is becoming tiny, limited, and crowded.

How do our own expectations and choices contribute to the conditions in which this experience occurred?



The Challenge of Creating a Sustainable Human Niche

A simple definition of *ecological niche* is *a sustainable population of a species in an ecosystem*. Most human societies have, over time, through migration and technology, tended to expand their habitat rather than establishing an ecological niche. We might consider ourselves to be the most invasive of species.

Until about 600 years ago, all cultures were rooted in ecological process, and social institutions were rooted in tradition. Cultural change and societal expansion was, though rapid on an ecological time scale, virtually imperceptible on a human time scale. Then what has become Euro-American culture began to develop in ways that have made cultural change and economic expansion a basic feature of the entire socio-cultural system. Modern industrial society has become an invasive culture in every other culture and in every biotic community on earth.

Although more people are spending more time in a built environment, we are all absolutely dependent on ecological process for air, water and food. To sustain civilizations, societies must come to occupy a sustainable ecological niche, so that earth process can restore its biological productivity and its ecological integrity and resilience.

It is almost 40 years since Kenneth Boulding identified the need for humans to shift from an open system “cowboy” economy to a closed system “spaceship” economy. Neither the economics profession nor the public in general seem willing to consider this issue.

In forestry, a *sustainable yield (SY)* occurs when *the annual harvest does not exceed annual regeneration and growth*. How must economic institutions change for human societies to function within the earth's sustainable yield?

How must we rethink our understanding of basic human rights and civil liberties to make $PxAt \leq SY$ possible? (See the Glossary entry on *Ecological Impact* for an explanation of the formula.)

(See Volume I, pages 39-41 and 50-55.)



What does the right to life, liberty and the pursuit of happiness mean in a spaceship economy?

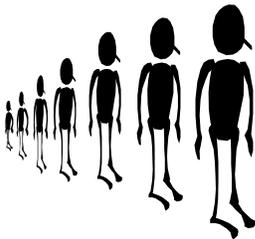
- It is frequently said that everyone has a right to clean water. What does this mean?
- How much clean water does each person have a right to? For what purposes?

How can aggregate consumption be restrained?

- One way might be to require everyone everywhere to use a bank card so that all purchases are accounted for, and a progressive sales tax places a limit on how much any one person can buy.
- Are there better ways to restrain consumption?
- If everyone's uses of goods and services are subject to societal monitoring and limitations, how are rights to privacy and freedom of conscience and expression to be understood and protected?



How can human population be stabilized?



- In 1966, Boulding proposed that every female receive 20 tradable childbirth permits, and that 10 permits be required for each child, as a way of harnessing markets to restrain human numbers.
- Are there better ways to limit the total human population?
- How large must the human population become before measures of this sort become acceptable?

What must we give up to keep what we value most?

Seeds of Violence, Seeds of Hope

Volume II: Exercises

SECTION 3

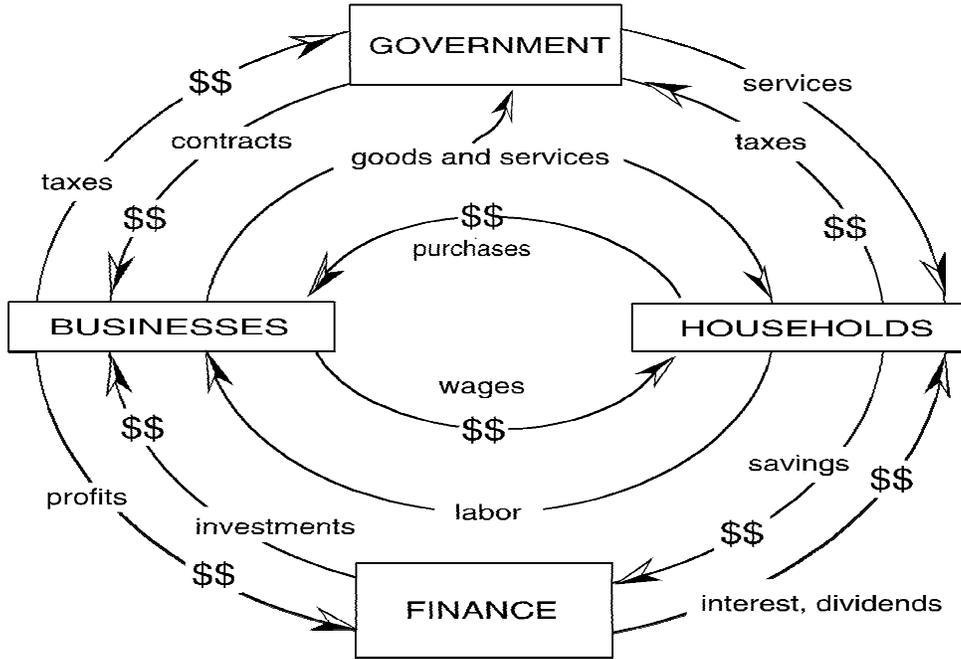
CONCEPTUALLY-ORIENTED EXERCISES

This section consists of exercises and activities that illustrate some of the basic concepts described in Volume I, Section 2, and Volume II, Section 1. It has been our experience that many Friends do not fully grasp the way money is created by the banking system. “Smithville’s Fabled Economic Growth” has been an eye-opener for these Friends.

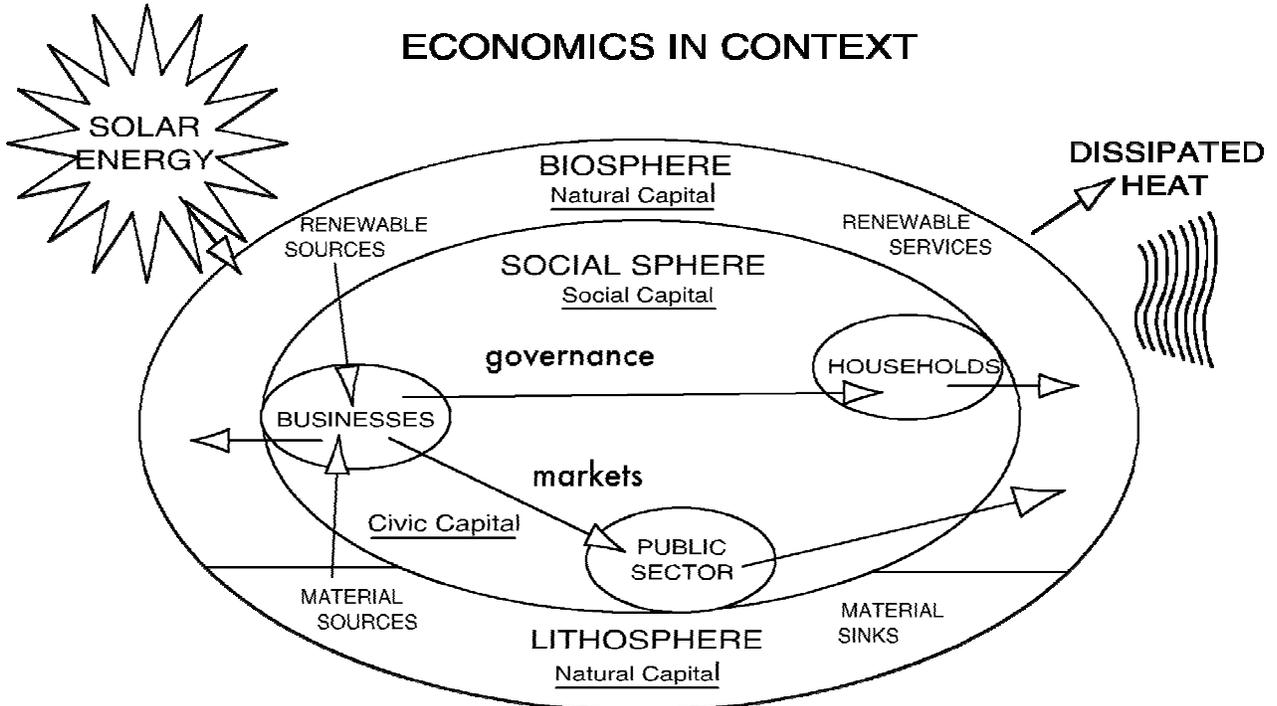
TWO DIAGRAMS: CONTRASTING PERSPECTIVES

For discussion: Compare these diagrams. What observations can you make about their similarities? About their differences? What questions do they raise for you?

ENHANCED CIRCULAR FLOW



ECONOMICS IN CONTEXT



Discussion of Contrasting Perspectives

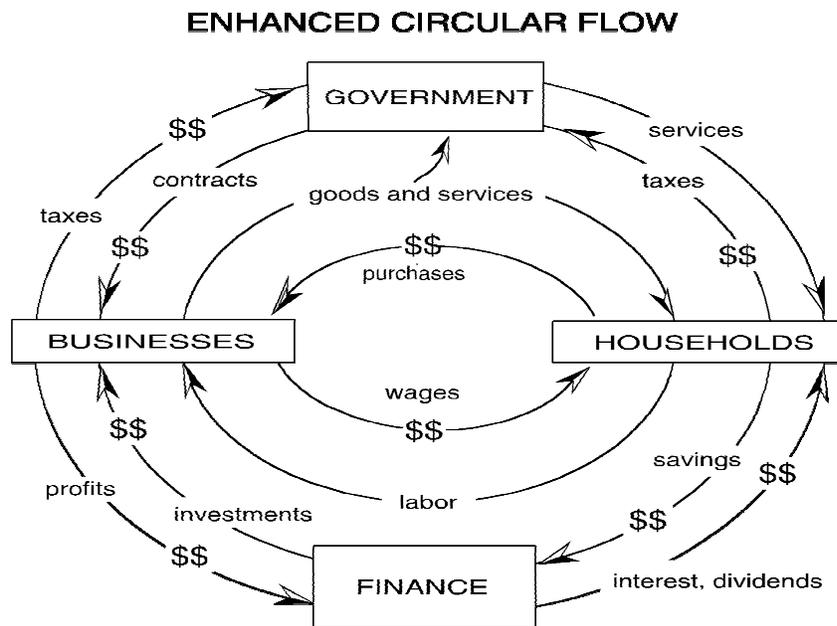
Purpose: To begin a series of sessions that includes conceptually oriented activities by exploring the two diagrams without pre-conceptions as a way of

- inviting an open, exploratory approach to the subject matter;
- introducing the traditional and ecological economics models early on, and
- generating a list of questions that will
 - ◊ help clarify participants' current thinking in relation to the subject, and
 - ◊ assure participants that questions are welcome.

(See Volume I, Pages 39-41 and 50-55.)

Suggestion

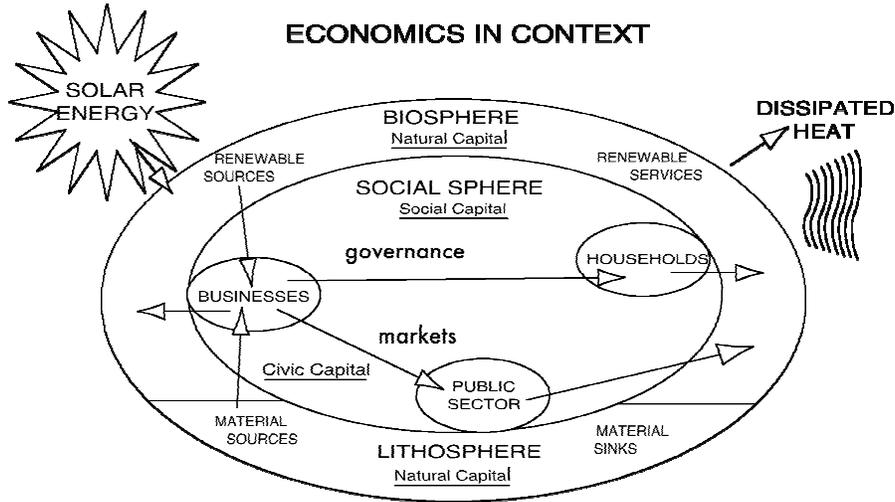
- Whether in small groups or in a whole group, be systematic about listing similarities, differences, and questions before beginning an open discussion.
- After discussing similarities and differences, review all the questions and provide some sense of when each will be addressed in the sequence of sessions.



Enhanced Circular Flow – Key Points and Questions

- Many familiar elements are missing and could easily be added.
- There is nothing to indicate the rate at which \$\$\$ and goods and services circulate. Where are decisions made that would affect the rate of flow?
- Specifically there is nothing about national debt or international trade. How might these affect the circular flow?
- There is nothing that shows energy or material entering or leaving the circular flow. Are there activities that can increase or decrease the rate of flow without increasing or decreasing the flow of energy and material into or out of the system as it is portrayed?

Discussion of Contrasting Perspectives

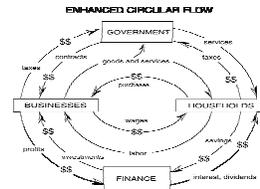
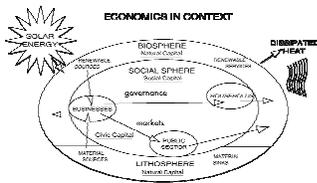


Economics in Context – Key Points and Questions

- What do the arrows represent? How are they different in the Enhanced Circular Flow?
- What happens if less energy flows out of the biosphere than into it? Why might this happen?
- What happens if the material flow from the lithosphere is returned to the biosphere rather than the lithosphere? Is a landfill part of the lithosphere or the biosphere? A coal mine?
- What resources from the biosphere that return to the biosphere have the possibility of regenerating themselves? What conditions are needed if they are to be available on a continuing basis? Can the economy increase the resources available to it from the biosphere?
- The longer energy and materials remain in the economy the less material will be needed from the lithosphere, and the less will be returned to the biosphere. One way of thinking about productivity is to make as much possible use of material that comes into the social sphere before it leaves the social sphere
- What must “capital” mean in order to make sense of “natural, social, and civic” capital? Where is “capital” in the Enhanced Circular Flow diagram? How do market activities relate to the uses, maintenance, increase or decrease of social capital?

Both Diagrams – Key Points Neither diagram suggests:

- how goods, services, and money produced by economies are distributed within societies.
- how the earth’s resources are distributed among past, present, and future generations.
- how the earth’s resources are distributed among human and non-human populations.



MARKETS AND BAR CODES

Purpose: To use a familiar example in order to illustrate the benefits of markets, market failures, and normative problems with markets (see Volume I, pages 42-49).



Suggestions

In trios or quartets, have participants discuss what they have experienced with the use of bar codes in supermarkets to help one another understand and illustrate the features of markets basic to micro-economics.

This can be done in less or more detail and depth depending on available time and the nature of the group.

1) Context: A supermarket is one example of a super market of a huge number of markets operating more or less under one roof.

What are examples of the variety of markets in which a supermarket is involved?

Note

In addition to retail markets for many food items, a supermarket is involved with wholesale markets of many kinds, with markets for electricity, fuel, water, and for capital goods, with capital markets, and the list goes on.

2) The benefits of markets include a) promoting voluntary exchange, b) allocating land, labor, and capital to give consumers what they want, and c) increasing productivity through innovation and specialization.

How does the innovation of bar codes contribute to these benefits?

Notes

- “Land” in economics consists of all material and energy resources, including for example how water is allocated between growing food and other uses.
- “Capital” includes both a) capital goods like scanning equipment, freezers and trucks, and b) financial capital to construct, equip, stock, operate, maintain, advertise, and insure the building and its contents.
- Productivity involves increasing the economic value of an employee hour.

3) What markets fail to provide that should not be expected of them include a) preventing negative externalities, b) providing public goods, and c) preventing excessive market concentration. Public policy is the means by which market failures can be corrected.

What are some examples of existing public policies affecting supermarkets that correct for negative externalities, lack of public goods, and market concentration?

How may bar codes contribute to market failures associated with supermarkets?

Notes

- A market failure is not to be confused with failure to compete successfully in markets.
- Public goods are those everyone is able to use without having to pay for using them, which may or may not be provided by government.

4) Some of the normative problems with markets based on ethical consideration are that they promote materialism, create losers, distribute income and wealth inequitably, and generate economic sprawl.

What are some examples of existing public policies that correct for normative problems with the markets associated with supermarkets?

How may bar codes contribute to normative problems associated with supermarkets?

Note

Some normative issues can be incorporated into the positive analytic framework of market failures. For example, “privacy” can be considered a public good, whether for the purpose of disposing of bodily wastes or of keeping others from knowing what one is buying.

The accuracy of scales and labels and the absence of harmful bacteria are public goods.

Other normative issues, including those having to do with distributing income and wealth, are not regarded as public goods by orthodox economists .

Questions relating to Friends testimonies

To what extent does opposing government interference with the way markets distribute goods and services imply that those who make the most money deserve greatest access to the goods and services that markets provide?

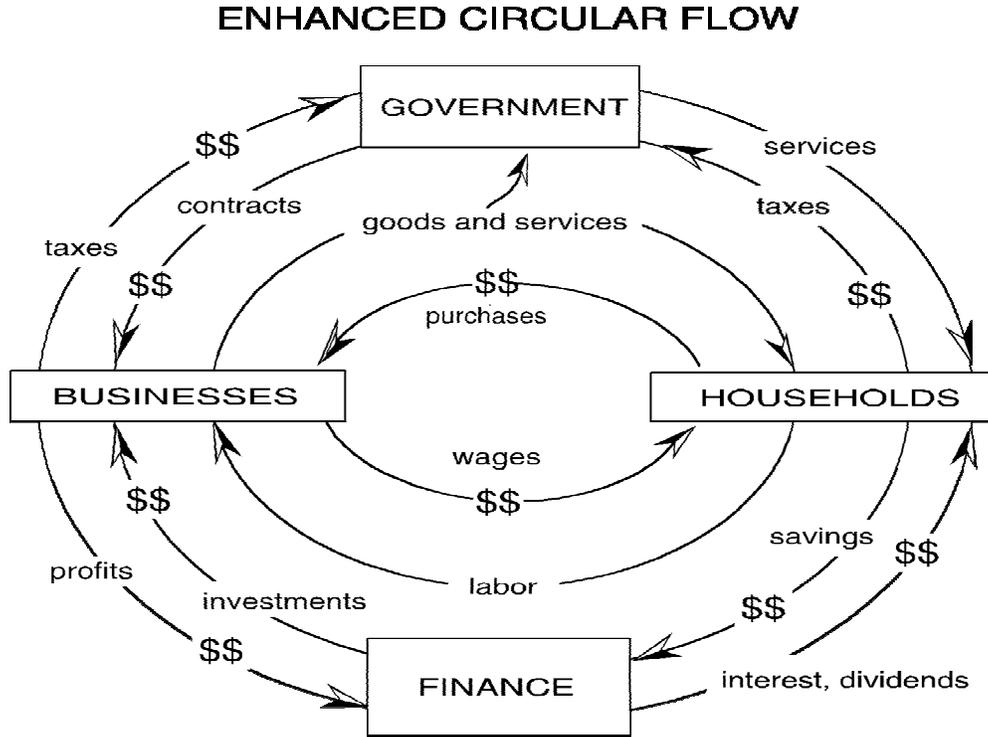
Are there other reasons for opposing government interference with the way markets distribute goods and services?

How are technologies based on bar codes apt to affect the distribution of income and wealth?



EXAMINING THE ENHANCED CIRCULAR FLOW DIAGRAM

Purpose: To clarify some of the basic insights on which macro-economic analysis is based.



Questions for Discussion

How are salaries and wages, and dividends and interest central to the flow?

How are the three uses of income to households central to the flow?

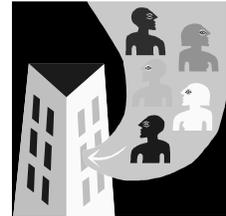


- Household purchases: Why are they essential? If consumer purchases increase, what effect may the increase have on economic activity?
- Taxes: How may increases and decreases in taxes affect the flow?
- Savings: What has to happen to household savings if the circular flow is to be maintained? What would encourage households to save more and spend less? Save less and spend more? What might happen to the circular flow in each case?

More Questions for Discussion

What are the three ways companies receive money in the flow?

- Why would entrepreneurs borrow money to make new investments?
- Why would companies reduce their level of investing?
- What happens to the circular flow when savings are used for speculation rather than investment?



What two roles are shown for government?

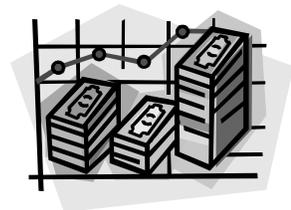


- How does government spending affect economic activity?
 - ◇ What type of government spending would be most likely provide more jobs?
 - ◇ What type of government spending would be most likely to create new business investment?
- How do different forms of taxation affect the flow differently?
 - ◇ What is apt to be the difference in effect if the taxes are progressive or regressive?
 - ◇ What is apt to be the difference in effect between:
 - sales taxes and income taxes?
 - taxing earned (salaries and wages) or unearned income?
 - between taxes on interest, dividends, and capital gains?

How is the circular flow apt to be affected by increases or decreases in the money supply?

Comments

- An insight that developed prior to Keynesian macro-analysis is that the circular flow requires a money supply that is both stable and elastic to sustain it. An increase in economic activity requires an expansion of the money supply if it is to be sustained. A rapid increase or decrease in the money supply is apt to be highly disruptive of the circular flow.
- The total money supply is affected both by governments in creating currency, or base money, and by the banking system in creating bank notes or checking accounts based on credit.
- Central banks have been created in industrial nations to provide stability in the banking system and elasticity in the money supply. The insights of Keynesian macroanalysis provided a clearer understanding of the complex and sensitive relationships between the money supply and the overall level of economic activity.



Next Steps

- How does the banking system affect the money supply?
- Why is the role of the central bank in managing the money supply important to sustain economic activity?

SMITHVILLE’S FABLED ECONOMIC GROWTH: An Illustration of Money and Banking

Purpose: To show with a simple example how fractional reserve banking works, how it fosters prosperity by promoting economic growth, and why the growth must continue if prosperity is to be maintained.

Most modern money is not in the form of government currency — bills or coins — but is in the form bank checks written on accounts created by banks when they make loans. The process by which this occurs is called “fractional reserve banking.” Banks know that most depositors leave most of their money in a bank most of the time; so banks keep only a fraction of their depositors’ money as a reserve to cover withdrawals. They use the rest to make loans, by which they make money by charging interest.



ment for goods or services and deposit them in a bank, the checks become new “money in the bank” which can be used to make more loans. In this process, bank checks replace currency as a medium of exchange for those transactions.

The circular flow diagram shows that economic activity in markets is made possible and sustained as money circulates in between producers and households. As we will now see in Smithville, when money circulates among households and producers through the banking system and banks use it to make loans, more money is created. When the new money circulates and is used by banks to create more new debt, there is a multiplier effect on the money supply as a whole.

The process of creating bank money is also sometimes called “deposit creation” because when a borrower writes a check based on a loan and the recipient puts in a bank instead of cashing it, this creates a new deposit in the banking system. As long as people accept checks as pay-



Cast of Characters

Narrator

Paul and Babe Bunyan, *loggers/teamsters*

Spuds and Susie Farmer, *corn and pig farmers*

Smitty and Sally Carpenter, *smiths and wrights*

Johnny and Julie Jackson, *apple farmers*

Mom and Pop Sellers, *merchants*

Wm. E. Buck, *banker*

Belle Clark, *bank clerk*



SCRIPT

NARRATOR: Several families moved west from Milltown, including the Bunyans, Farmers, Jacksons and Carpenters, to settle at a place that came to be called Smithville. At first, things were pretty down to earth.

Household Phase

BUNYAN: We live off the land. We have two horses we use to cut timber to trade for bacon, meal, spuds, tools, and jack. Every few months we ride to Milltown to trade for things the others can't make, like salt and iron.



FARMER: We built our own house, grow most of our own food, make our own clothes. We grow extra corn and potatoes to feed the pigs. We trade bacon, corn and potatoes for tools, salt, and jack.

CARPENTER: We built our own house, grow some of our own food, make our own clothes. We have a small forge and make things with wood and hardware the others can't make themselves in exchange for much of our food, salt, and jack.

JACKSON: We built our own house, grow most of our own food, and make our own clothes. We grow apples and have a small still to make jack that we trade for other things. Everyone wants our jack, 'cause you can keep it forever, and they can use it to trade for whatever they need when they don't have anything else to trade with.

Market Phase

NARRATOR: A new family, the Sellers, moved out from Milltown and opened up the Smithville Market. Instead of trading back and forth, the community began to buy and sell at the market.



SELLERS: We opened a general store. We buy on account and sell on credit. We buy and sell bacon, flour, potatoes, salt, and jack; also iron, wood, hardware and tools; plus vegetables and fruit in season. The Bunyans come once a month from the store in Milltown to deliver flour, iron and salt, and pick up bacon, jack, and potatoes.

FARMER: We still grow our own food and make our own clothes. We buy hardware, tools, salt and jack at the store, and sell bacon, corn and potatoes.

JACKSON: We still grow most of our own food and make our own clothes. We buy bacon, hardware and tools at the store and sell jack.

CARPENTER: We still grow some of our own food and make our own clothes. We buy food, iron, wood and jack at the store, and sell hardware and tools.

BUNYAN: We still live off the land but we do more hauling. We buy some of our food, plus tools, salt and jack at the store, and sell wood.

Capitalist Phase

NARRATOR: Then William Buck moved to town and opened up a bank.

NOTE: Buck passes all the deposits he receives to Belle, the bank clerk, who posts the amounts of all the deposits, reserves, and loans as they appear on the Bank Ledger (on page 58) as transactions occur.

BUCK: Hi, you must be the Sellers. I'm Wm. E. Buck, but call me Bill. I'm planning to open up a bank. How'd you like to be my partner? I've got \$750 to get started. Can you put up \$500? Otherwise I'd have to call it Bucks Bank and people might get the wrong idea. *(cue to laugh!)* We'd keep one fifth in the bank as a cash reserve, and loan out the rest. I'll be the manager. The widow Clark wants to move out from Milltown, and we can hire her to be the bank clerk. Bill and Belle sounds pretty catchy, don't you know *(cue)*. You'd get a steady line of credit for your market, so you could do more business, and we'd split the bank's profits three to two, same as our investment.



SELLERS: Good idea. We've got enough saved up in the Milltown Bank. Here's a note for \$500. *(Hands note to Bill who gives it to Belle.)*

BELLE: Line 1 — \$1250 in Bank's Capital account.



BUNYAN: Yo Sellers, we think we could get a lot more work if we had a larger wagon.

SELLERS: Sure Bunyan, I'll get one made for you. Yo Bill, I need \$1000. Can you give me my \$500 back and loan me \$500?

BUCK: No, we're partners. That's not how it works. Your \$500 stays in the bank, and the bank loans you \$1000. Belle will give you a \$1000 note. You'll soon get the picture. *(Belle gives note to Sellers.)*

BELLE: Line 2 — \$250 Reserve, \$1000 Loan, (\$1000) in Market account.

SELLERS: Yo Carpenters, can you make a 16 ft wagon for 1000 bucks? Here! We'll pay in advance. *(Gives note to Carpenter.)*

CARPENTER: Sure, but I'll need some iron, and maybe you could get in extra for future orders. Yo Bill. Here's a check for \$1000. Can you open us an account? *(Gives note to Bill who gives it to Belle.)*

BUCK: Sure.

BELLE: Line 3 — wagon due in Market. \$1000 in Carpenter account.

SELLERS: Yo Bill, we need another loan for about \$800. Can you do it?

BUCK: Sure. *(Belle gives note to Sellers.)*



BELLE: Line 4 — \$200 Reserve, \$800 Loan, (\$800) in Market account.

SELLERS: Yo Bunyan, here's \$800. Bring me a load of iron on your next trip to town? *(Gives note to Bunyan.)*

BUNYAN: Sure. Yo Bill. Here's a check for \$800. Can you open us an account? *(Gives note to Bill who gives it to Belle.)*

BUCK: Sure.

BELLE: Line 5 — iron in Market, \$800 in Bunyan account.



JACKSON: Yo Sellers, we've just finished distilling our jack. Will you buy some?

SELLERS: Sure, as much as you'll sell for what we can afford. We think we can scrape up about \$640. Here's a check for \$640, but wait until tomorrow to take it to the bank. *(Gives note to Jackson.)*
Yo Bill, we're beginning to get the picture. Credit us with another \$640.



BELLE: Line 6 — \$160 Reserve, \$640 Loan, (\$640) in Market account.

BUCK: Sure:

JACKSON: Yo Bill. Here's a check for \$640. Can you open us an account? *(Gives note to Bill, etc.)*

BELLE: Line 7 — jack in Market, \$640 in Jackson account.



BUCK: Sure.

FARMER: Yo Sellers, our harvest is in, and if you'll buy our bacon we'll slaughter half our pigs and we can sell more corn and potatoes that we won't need for winter feed.

SELLERS: We'll take the bacon if it's well salted. Is the corn dry? We'll give you \$500 for the bacon, corn, and half the potatoes we bought last year. We couldn't sell 'em all. We've been doing more business this year so we'll take a risk and give you \$12 for the rest of the potatoes.

Seeds of Violence, Seeds of Hope

FARMER: What can we say? You'll pay us right away?

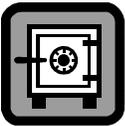
SELLERS: Sure. We'll give you a check for \$512 good at the bank as soon as you deliver the goods.
Yo Bill, credit us another \$512. *(Belle gives note to Sellers who gives it to Farmer.)*

BUCK: Sure

BELLE: Line 8 — \$128 Reserve, \$512 Loan, (\$512) in Market



FARMER: Yo Bill. Here's a check for \$512. Can you open us an account? *(Gives note to Bill, etc.)*



BELLE: Line 9 — food in Market, \$512 in Farmer account.

BUCK: Sure.

NARRATOR: So do you all begin to get the picture? There's probably lots to talk about.

THE END

SMITHVILLE BANK LEDGER

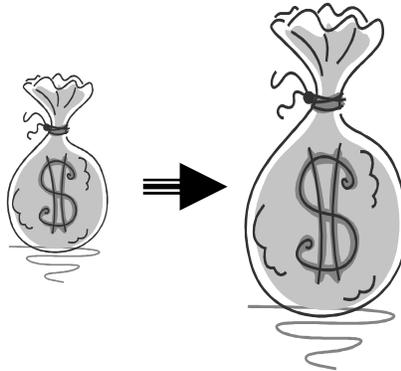
	Transactions				Accounts				
	Deposits	Reserves	Loans	Sellers	Carpenter	Bunyan	Jackson	Farmer	Bank
1	(\$1250)								\$1250
2		\$250	\$1000						
3	(\$1000)			wagon	\$1000				
4		\$200	\$800	(\$800)					
5	(\$800)			iron		\$800			
6		\$160	\$640	(\$640)					
7	(\$640)			jack			\$640		
8		\$128	\$512	(\$512)					
9	(\$512)			food				\$512	
10	etc.	etc.	etc.			etc.			
until	0	0	0						
Total	(\$6250)	\$1250	\$5000*	**	**	**	**	**	\$1250

* plus merchandise

** \$5000 in accounts of community folks to buy merchandise

SMITHVILLE AND THE MULTIPLIER

Pretty neat! This is referred to as the “multiplier effect” on the money supply of fractional reserve banking. Theoretically, if the cycle runs to completion (which never actually happens), the amount of new money will approach the reciprocal of the reserve requirement: the lower the reserve requirement, the higher the multiplier effect. If, for example, the reserve was 10% (1/10) instead of 20% (1/5), the multiplier effect would be 10 instead of 5.



If the market maintains a line of credit with the bank, so that the community continues to create debt and new wealth to repay it, this will prevent a contraction of the currency. Continuing to create new wealth may not necessarily require more labor, especially if labor efficiency increases, but it almost always requires an increase in the use of material resources.

The process as presented here is never this visible or simple in practice. The activity of borrowing and buying and selling and depositing is continuous and involves many banks, borrowers and depositors

New loans have created new money and helped provide new merchandise.

And it works, as long as

- a) someone is willing to keep going into debt until the bank has no more money to lend,
- b) no one withdraws cash from the bank,
- c) someone buys all the merchandise, and
- d) all loans are repaid.

However, when the merchandise has been sold and loans paid off, unless money is re-loaned, all that remains is the original \$1250 in the bank’s own account, and \$5000 worth of merchandise in the community. The community will have increased its real wealth, but the economic system that made this possible will have collapsed.

Complications. The market, of course, has expenses and wants to make a profit. As long as the market covers its expenses and profits by its loans, and spends them back into the community, it will participate in the cycle of borrowing and activity to produce more wealth and support the value of the money. Everyone can buy from and sell to one another using checks to shift the money from one account to another.

The bank also has expenses and wants to make a profit. It collects money for expenses and profit by charging interest. If the rate of interest is 5%, and the cycle of loans and new deposits plays out, the bank will be owed 5% of \$5000, or \$250. Where will this money come from?

Furthermore, serious problems arise when borrowers are unable to repay their loans.

Preparation for Role Play and Discussion About SMITHVILLE

Equipment/materials needed:

- A board or flipchart and 2 or 3 markers, chalkboard and chalk, or large bulletin board*.
- An index card to serve as a bank note.

If using markers or chalk, prepare a Bank Ledger with headings as on pg. 58 and lines for transactions. Headings (and underlined dollar amounts as transactions are recorded) can be in black. (Use red or some other color for dollar amounts in parentheses as transactions are recorded.)

**If using a bulletin board*, use colored card stock (2 colors) to prepare tags for each label and dollar amount shown on the Bank Ledger. Thumb tack the labels on the bulletin board in advance (and thumb-tack the dollar amounts in place as transactions are recorded).



Assign SMITHVILLE Roles

The role of Belle should be taken by a (the) leader. Depending on number of participants, one or both members of a couple can be assigned; if both, they can share the role.

Arrange chairs for each role except Belle, with the chair for Buck and Sellers (1 or 2) next to each other, and the others so that everyone can see the characters and the bank ledger, and the note can be readily passed around.



Note: The reason for doing this as a role play is that many people have difficulty grasping the process, and taking it step by step helps them “get it.” (It is a waste of time for people who already get it, but we find that many people who think they understand how fractional banking works, don’t really understand it until they see it happen.) As Belle, a (the) leader may want to interject explanations and answer questions as the steps proceed.

Suggestions, Comments and Questions for Discussion:

At the end of the role play, have participants read “Smithville and the Multiplier” on page 153.

After “New loans have created...” explain that the numbers in parentheses are liabilities and the other numbers are assets. Point out that both in the transactions and the accounts, assets plus liabilities equals zero. This is the sense in which bank money is said to be created out of thin air.

Point out that on the 19th century frontier, Buck might have had \$750 in gold or silver coin, and the Sellers Millville Bank note would/should be convertible to hard money. If there was a “run” on the bank’s cash reserves, the Bunyans may have been called upon to make an emergency trip to Millville to cash the note. After 1932, the start-up funds would have been in the form of paper dollars backed by the full faith and credit of the U. S. government.

As long as there was no “run” on the bank, or if there was no other form of money that the bank notes could be redeemed for, this whole process could occur without any initial investment. In fact, that is what was happening when the Market was buying on account and selling on credit. This is how some of the local currencies that some communities have created are operating.

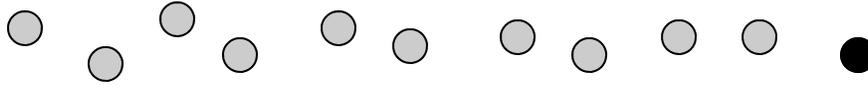
After “However...” explain that much of commercial enterprise operates on the basis of having a line of credit in a bank to provide for and maintain an inventory of goods and supplies.

After “Complications!” ask what is apt to happen if a borrower doesn’t repay a loan? Explain that banks “secure” most loans by requiring some kind of “collateral” that can be “liquidated” if there is a default. This is to say that the bank can take (seize) the “collateral” — perhaps the Market’s inventory — and sell it for currency to provide the reserves necessary to “cover” the banks deposits, e.g., give their other depositors currency on demand. It’s easy to understand how if this happens the bank becomes a “bad guy” instead of a “good guy.” It’s also easy to understand that it may not be easy for the bank to foreclose on loans and liquidate collateral. If this happened in Smithville, what difficulties would this create for the bank?

Then ask what happens to the bank’s account if the bank charges 5% interest? (The Carpenters will owe \$50, the Bunyans \$40, the Jacksons \$32, the Farmers \$26, and the community as whole \$250, which is 5% of \$5000, and an income — that must cover the bank’s operating costs — of 20% on the initial investment.) The community has an added liability of \$250. Where does the community get the extra \$250 to pay interest to the bank?



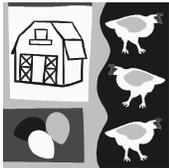
THE ELEVENTH DISK



Purpose: to consider a simple illustration of the way money based on interest-bearing debt can work in some circumstances, and explore questions about this form of money in other contexts.

Background: There is a range of views about the role of money in an economy, and how a monetary system based on interest bearing debt relates to creating economies that can function within the earth's sustainable yield. At one end of this range is a view that money is a functionally neutral tool, an important factor in enabling markets to function, but not a determining factor in the tendencies of markets to expand or contract. At the other end of the range is a view that money based on interest-bearing debt is a major factor that drives economic competition and market expansion or contraction, with the attendant risks of inflation or depression, and market concentration, with all the instability that this entails.

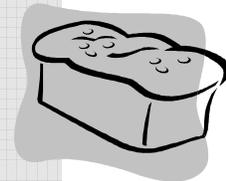
A Folk Tale: Bernard Lietaer, a Belgian financier, and a proponent of the view that money based on interest-bearing debt drives economic competition and expansion, illustrates this view with a folk tale from the Australian frontier:



Once upon a time, in a small village in the Outback, people used barter for all their transactions. On every market day, people walked around with chickens, eggs, hams and breads, and engaged in prolonged negotiations among themselves to exchange what they needed. At key times of the year, like harvests or whenever someone's barn needed repairs after a storm, people remembered the tradition of helping each other out they had brought from the old country. They knew that if they had a problem some day, others would help them in return.



One market day a stranger with elegant black shoes and a shiny white hat came by and observed the whole process with a sardonic smile. When he saw one farmer running around to corral the six chickens he wanted to exchange for a big ham, he could not keep from laughing.



"Poor people," he said, "so primitive."

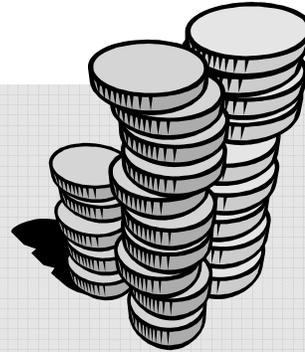
The farmer's wife overheard him and challenged the stranger. "Do you think you can do a better job of chasing chickens?"

"Chickens, no," responded the stranger, "but there is a much better way to end all this confusion."

"Oh yes? How so?" asked the woman.

"See that tree there?" the stranger replied, "I will wait there for one of you to bring me a cowhide. Then have every family visit me, and I'll explain the better way."





And so it happened. He took the cowhide and cut perfect leather disks in it, and put a graceful little stamp on each disk. Then he gave to each of the families ten disks, and explained that each represented the value of one chicken.

“Now you can trade and bargain with the disks instead of chasing the chickens,” he explained. It made sense. Everybody was impressed by the man with the shiny shoes and white hat.

“Oh, by the way,” he added after every family had received their ten disks, “in a year’s time I will come back to the same tree. I want each of you to bring me back 11 disks. The 11th disk is a token of appreciation for the technological improvement I just made possible in your lives.”

“But where will the 11th disk come from?” asked the farmer with the six chickens.

“You’ll see,” said the man with a reassuring smile.

As the families soon learned, even if everyone managed their affairs well, one of the families would have to lose all of their disks in order to provide ten other families with the 11th disk. So when a storm threatened the crop of one of these families, people became less generous with their time to help before disaster struck.

While it was much more convenient to exchange disks than chickens on market day, the new game had the effect of actively discouraging the spontaneous cooperation that had been a village tradition. Instead the new game generated a competitive under-tow.”

(Adapted from Bernard Lietaer, *The Future of Money*, Century, 2001, p.50. Used with author’s permission.)

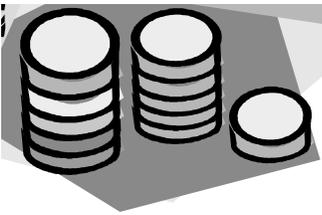
Reflections on the Eleventh Disk and Structural Violence

This fable illustrates the disempowering of a community, and the potential for social systems to create structural violence. It also presents a highly negative view of the role of banking in economic development.

Questions:

- If you were a member of this community, and the village met to decide how to keep the man with the black shoes and white hat from destroying its traditions, what options would you propose?
- From a perspective of understanding how communities can benefit by using money, what might the community be able to learn about using disks to improve their lives?
- How could the story be re-written to turn the man’s sinister smile into a benevolent smile? To present the banker as a “good guy” rather than as a “bad guy?” How might the story be continued to illustrate both the possible benefits and possible drawbacks of using money?

Some possible options: When the man returns,



- tell him to go home because he was deceitful and he isn’t needed;
- make some more disks so that everyone has enough to give him the 11 disks he requested;
- have each family give him 10 disks and one chicken, and let him chase the chickens;
- invite him to stay and contribute more ideas to the community, in which case the community would probably ask more questions and think things through more carefully before agreeing to his suggestions.

Some possible benefits and problems of using the disks to improve their lives:

- They can make their own money based on how much they need. If they don’t have to chase chickens on market day, they will have more time to visit, or they may produce more bread, eggs, chickens, and hams.
- How many disks do they need to do business on market day? If 1 disk = 1 chicken, they will be able to figure out the price of bread, eggs and ham in disks by negotiating in the market. They will need just enough so that over time every family can bring 10 disks worth of produce to market to sell, and can return home with 10 disks worth of produce they have bought, plus 10 disks for next market day.
- If they use the time saved to produce more goods for market, they may discover that 10 disks is enough to exchange 20 disks worth of produce, or 30. If they keep increasing how much they bring to market each week, at some point, more disks will be needed to keep things moving. However, if there are too many disks, the price of chickens and everything else will go up.
- If one family decides to sell more than they buy, and to see how many disks they can save, it may work for a while, but eventually there won’t be enough disks to make the market run smoothly. If a number of families begin to save disks, they will certainly need to make more disks to keep the market going.
- Over time, there may come to be many more disks than there are chickens-worth, but the system will work as long as the number of disks the families bring to market is in synch with the number of chickens-worth they bring. However, if all the families bring more disks than they bring chickens-worth to market, expecting to bring more chickens-worth home than they took to market, there will certainly be a problem.

Those who view money as a functionally neutral tool would see charging interest on the disks as a small price to pay for the benefit of having more time to increase production or do other things. As long as the community works out a way to pay the man without ruining one of the families, everyone is better off.



Those who view money as helping to determine the social context in which it is used would see the interest charged on debt as generating a systemic deficit between the money created and the money owed, and that this generates a pervasive climate of competitiveness and acquisitiveness. Creating a money deficit is a characteristic of economic colonialism, which the tale of the 11th disk illustrates.

From this tale, and from Smithville, is it easy to see that, for a proactive and enterprising community, a stable and elastic money supply helps to promote trade, specialization, and economic expansion. Indeed, expansion enables a community to eliminate the dilemma posed by the tale, while without the use of money, opportunities for trade, specialization, and economic expansion are extremely limited.

What is not clear from the tale, and where the different views of money come into sharp focus, is to what extent money based on interest-bearing debt drives economic expansion, and whether or not this type of monetary system can work for economies that must operate within ecological constraints.

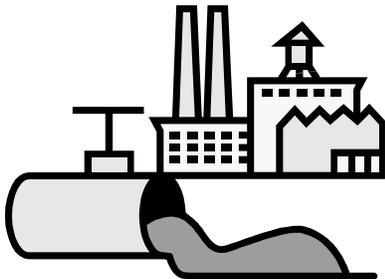
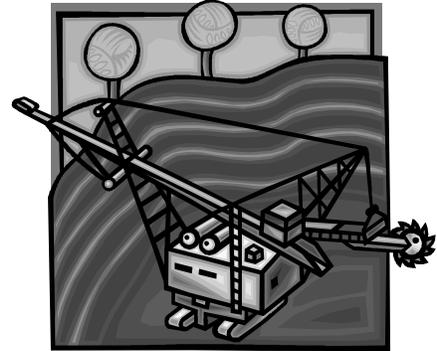


TOWARD A MORE ECOLOGICALLY INTEGRATED ECONOMICS
Comparing Basic Conceptual Differences Between Traditional and Ecological Economics

Concepts	Simple Definitions	Positivist Economics	Ecological Economics
BENEFIT	Something someone wants	Something someone pays for	Enhances quality of life
COST	Something someone doesn't want	Opportunity sacrificed for a benefit	Dissipated energy or matter
WORK	Effort to achieve a benefit	Using land, labor, and capital to produce goods and services	Using energy to concentrate matter or matter to concentrate energy
ENERGY	Ability to do work		
RESOURCE		Available energy and matter from land, labor, and capital	Concentrated energy and matter
THROUGHPUT			Energy and matter concentrated as inputs and dissipated as outputs
<i>CAPITAL</i>		<i>Surplus used to increase the ability to produce</i>	<i>A stock, renewable or non-renewable, that yields a flow of a resource</i>
<i>INVESTMENT</i>		<i>Saving used to increase manufactured, intellectual, and human capital</i>	<i>Saving used to maintain and increase all forms of natural, social, and manufactured capital</i>
<i>EFFICIENCY</i>		<i>Most benefit from resources</i>	<i>Most work for least energy</i>
<i>PRODUCTIVITY</i>		<i>Most benefit per labor/hour</i>	<i>Most benefit for least throughput</i>
<i>SUSTAINABLE DEVELOPMENT</i>		<i>Most throughput for least cost</i>	<i>Most benefit from least throughput</i>
<i>BASIC ASSUMPTION</i>		<i>Ingenuity will provide increased benefits and reduced costs</i>	<i>Ingenuity cannot overcome the laws of thermodynamics</i>

Kenneth Boulding, *The Meaning of the 20th Century*, 1964, (paraphrase):

Can humans use a limited endowment of non-renewable resources to make a transition to a stable high-technology culture that is based on the sustainable yield of renewable resources?



Herman Daly, *Steady-State Economics*, 1991, (paraphrase):

A sustainable society must be based on using renewable resources at rates that do not exceed their capacity to renew themselves, using non-renewable resources at rates that do not exceed our capacity to substitute for them, and using no resources that exceed the capacity the natural world to assimilate or process the wastes associated with their use.



