

# New Solutions



*Community, a solution for saving the environment and conserving resources with equity for all.*

## Peak Oil – Peak Economy

*In the last issue of New Solutions, we proposed that in addition to Peak Oil, we are at a time of Peak Technology as there are no new technologies which can replace fossil fuels. In this issue, we examine the impact of Peak Oil on the world economic structure, one built on the confidence in ever-expanding markets fueled by technology, itself fueled by oil.*

*Our analysis suggests that there is every reason for concern – and unless serious action is begun now, we may very well be headed toward another Great Depression. We are hovering on the edge of an unsustainable Peak Economy.*

### The Financial-Industrial Revolution

The February 2005 newsletter of the Association for the Study of Peak Oil and Gas (ASPO) delves into the intimate connection between Oil and the Financial System:

“The Industrial Revolution began in the mid 18th Century with the exploitation of coal, initially in Britain, providing a new fuel for industry, transport and trade, which grew rapidly. The Oil Age dawned 100 years later, initially to provide lamp-oil for illumination, but later to fuel transport, following the development of the Internal Combustion Engine. Electricity generation expanded widely, fuelled first by coal, but later mainly from oil, gas and nuclear energy. This epoch has been widely seen as one of amazing technological progress, which has conditioned many people to think that there must always be a technological solution.

“The Industrial Revolution was accompanied by an equally important, but less visible, Financial Revolution. In short, commercial banks lent money in excess of what they had on deposit, effectively creating money out of thin air, but the system worked because tomorrow’s expansion provided collateral for today’s debt. It was effectively a system of confidence, an intrinsic element of all debt. So, it might be better termed the Financial-Industrial Revolution.

“The Stock Markets evolved from being simply an exchange of dividend-yielding

instruments to become largely speculative institutions, being in turn stimulated by the tax regime that gave preferential treatment to speculative gains. In addition, World trading currencies, previously the pound sterling and now the U.S. dollar, delivered massive hidden returns to the issuing countries, becoming in effect the prime benefit of Empire.

“The World’s population expanded six-fold exactly in parallel with oil, which provided much of the fuel with which to plough the field, and bring food and manufactured goods to market, thus indirectly supporting the Financial System. The internationalization of transport of food reduced the risk of local famines when harvests failed for climatic and other reasons.

“The Second Half of the Oil Age now dawns and will be characterized by the decline of oil, followed by gas, and all that depends upon these prime energy sources. The actual decline of oil will be gradual at less than three percent a year: such that the production of all liquid hydrocarbons in 2020 will have fallen to approximately what it was in 1990. In those terms, it does not appear to be a particularly serious situation. But in reality, it is a devastating development because it implies that the oil-based economy is in permanent terminal decline, removing the confidence in perpetual growth on which the Financial System depends. Without the assumption of ever-onward growth, borrowing and lending dry up: there being little viable



Library of Congress, Prints & Photographs Division, FSA-OWI Collection.

The Great Depression was caused by a lack of confidence in the financial system. A long-term decline of the economy, brought on by Peak Oil, could conceivably have the same result.

left to invest in. It follows that there will be a need to remove vast amounts of so-called Capital, which in fact was not Capital in the sense of being the saved proceeds of labor, but merely an expression of speculative confidence in ever onward economic growth. This in turn leads to the conclusion that the World faces another Great Depression, triggered more by the perception of long-term decline of the general economy rather than the actual decline of oil supply itself which is gradual not cataclysmic. The World is definitely not about to run out of oil, but it does face the onset of decline having consumed about half of what is readily available on the Planet.”

ASPO is a five-year-old European organization that is educating the world about Peak Oil. Many ASPO members are followers of Dr. M. King Hubbert (1903-1989), a well-known oil geologist and the “discoverer” of Peak Oil. Hubbert also wrote about growth and in 1976 concluded his paper *Exponential Growth as a Transient Phenomenon in Human History* with the following observations:

“It appears therefore that one of the foremost problems confronting humanity today is how to make the transition from the precarious state that we are now in to this optimum future state by a least catastrophic progression. Our principal impediments at present are neither lack of energy or material resources nor of essential physical and biological knowledge. Our principal constraints are cultural. During the last two centuries we have known nothing but exponential growth and in parallel we have evolved what amounts to an exponential-growth culture, a culture so heavily dependent upon the continuance of exponential growth for its stability that it is incapable of reckoning with problems of non-growth.

“Since the problems confronting us are not intrinsically insoluble, it behooves us, while there is yet time, to begin a serious examination of the nature of our cultural constraints and of the cultural adjustments necessary to permit us to deal effectively with the problems rapidly arising.”

Twelve years later, in 1988, Dr. Hubbert said in an interview, “Our window of opportunity is slowly closing... at the same time, it probably requires a spiral of adversity. In other words, things have to get worse before they can get better. The most important thing is to get a clear picture of the situation we’re in, and the outlook for the future – exhaustion of oil and gas, that kind of thing – and an appraisal of where we are and what the time scale is. And the time scale is not centuries, it is decades.”<sup>1</sup>

Dr. Hubbert and the founder of ASPO, Dr. Colin Campbell, wrote extensively about the physical limitations of oil resources. Hubbert in his time (the 1970s) and Campbell today were then and are now consistently countered by neoclassical economists who deny the possibility of resource limits. Neoclassical economics represents the controlling paradigm of our modern society. Economists, more than any other single group, will be viewed historically as responsible for the period of adversity that is coming, since their denial of reality and their personal attacks on the scientists defining Peak Oil have led to a continued lack of action from governments.

It is not too far-fetched to view

economics as a modern religion holding beliefs with the same vigor as the clergy of old and also having an omnipotent unseen god, the market, with its spiritual orientation couched as “the invisible hand of the market.” And, like the church clergy, economists viciously attack any naysayers.

## Economic Doctrine

Adam Smith, author of *The Wealth of Nations* (1776) laid the intellectual framework that defined the “free market,” a theory that is still dominant today. He coined the expression “the invisible hand of the market” to argue that personal self-interest will result in the most efficient use of resources, with public welfare resulting as a by-product. Smith concluded that state and personal efforts to promote social good are less effective than unbridled competition in a free market environment.

The associated doctrine of *laissez-faire* (a French phrase meaning to “let things alone, let them pass”) is used as an injunction against government regulation of trade and also as a synonym for strict free market economics. The usual terms used are simply “the market,” or “the market mechanism,” which means the allocation of production through supply and demand.

Smith indirectly defines human nature as well, implying that people’s main reason for existence is to satisfy their self-interest. In his view humans are selfish and individualistic but fortunately, by each person pursuing their own self-interest, society is improved. Anything that interferes with this philosophy of greedy materialism, particularly government intervention, is viewed as damaging to society.

Within a few years of the publication of *The Wealth of Nations*, James Watt obtained his early patents on an advanced steam engine and began manufacturing these machines. This is often said to mark the beginning of the Industrial Revolution. Thus, the beginning of modern economics and modern technology appeared at the same point in history – in fact, Watts and Smith knew each other. Statements such as “our economy is fueled by cheap energy” might be more correctly stated as “our economic theory is based on the concept of an infinite supply of fossil fuels” and

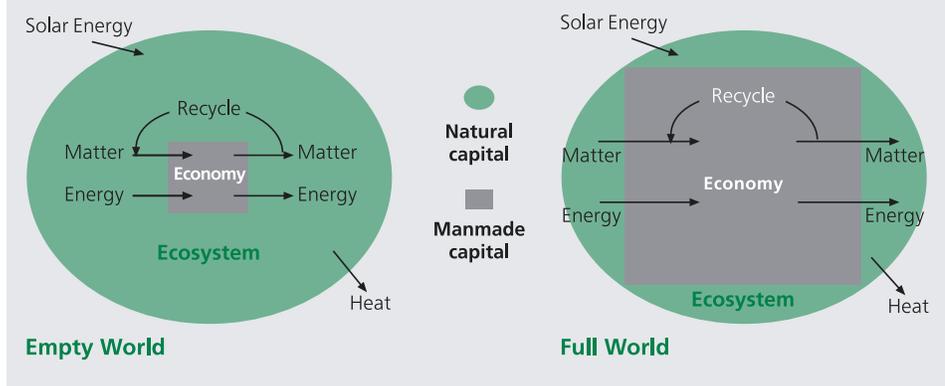
that the “accumulation of material goods is the highest aim of mankind.”

The main concept of modern economic doctrine (that an ideal world consists of individuals pursuing their self-interest) implies that the consumption of material goods is the first priority of humans, ahead of any moral, ethical or spiritual considerations and also ahead of concern for others or the environment. Modern economic doctrine also includes the concepts of specialization (using the assembly line to increase efficiency), standards (eliminating uniqueness and craftsmanship), routinization of work (eliminating creativity and joy) and control (turning the small business person into a wage-earner). Since this economic system’s success is based on economics of scale, advertising became a tool to turn optional wants into seductively addictive needs. Finally, the doctrine espouses private property as preferable to public ownership of land.

The main concept of modern economic doctrine implies that the consumption of material goods is the first priority of humans, ahead of any moral, ethical or spiritual considerations and also ahead of concern for others or the environment.

To support this doctrine of material consumption, economists must assume that the natural world offers a limitless source of the raw materials necessary for the finished goods that are to be consumed. Their view is that if a natural resource declines, then capital, technology and the incentive for personal gain will stimulate human ingenuity to find a replacement. The following Figure 1<sup>2</sup> by the economist Herman Daly illustrates a more realistic world view. It shows that the economy (designated as a box with inputs and outputs of material and energy) is contained within a finite ecosystem. The economy can “grow,” (use more and more energy and material) but only until it reaches the limits of the ecosystem. It cannot grow outside of that boundary.

Two other concepts are important to understand our modern economic system. The first is “externalization,” invented to deal with the contradictions of basic

**Fig. 1: A Macro View of the Macroeconomy**

In a realistic view of the macroeconomy, potential for growth is not infinite. The more economic capital grows, the less of natural capital remains.

economic doctrine. Whenever an economist cannot rationally explain a problem, he or she deems it to be an “externality.” This means it is not taken into account when calculating economic costs. For example, the area of dead ocean at the end of the Mississippi river is deemed an “externality.” Ignoring it allows one to justify pollution as “economical.”

The second concept deals with information. Presumably “the market interaction” between buyer and seller works effectively with the buyer having sufficient information to make an informed buying decision. Economic theory argues that this information exists even though common sense tells us people frequently lie.

In 2001, a Nobel Prize in Economics was given to George Akerlof, Michael Spence, and Joseph Stiglitz for their theory of Asymmetric Information, which states that since not every person has the same data the market is not always optimal. Thus the “invisible hand” provides more opportunity to those who have more information or those who create disinformation to mislead others.

Most religions and even secular moral code support the idea that lying is wrong. Only in economics does it become an “interesting theory” about how people interact. You say the car you bought was a lemon and the seller knew it? Don’t worry – it’s merely a case of Asymmetric Information.

## Growth Economics and Colonialism

Not surprisingly, the development of modern economics also coincided with European colonialism, which found – in religion – rationalization for centuries of exploitation of the non-white peoples of the world. The “religious” view was that non-white people were “pagans” who needed to be “converted” for their own good. The famous 1899 poem by British writer Rudyard Kipling entitled “Take Up the White Man’s Burden” was a prime example of how these “noble deeds” were justified.

*Take up the White Man’s burden—  
Send forth the best ye breed—  
Go bind your sons to exile  
To serve your captives’ need;  
To wait in heavy harness,  
On fluttered folk and wild—  
Your new-caught, sullen peoples,  
Half-devil and half-child.*

Although Kipling was British, his poem was celebrating the expansionist period of the United States at the end of the 19th century, when the U.S. conquered Hawaii, the Philippines, Cuba and Puerto Rico. This philosophy eulogized the centuries of control of the poorer nations such as Indonesia (controlled by the Dutch from the late 1600s to 1948), India (controlled by England for almost 200 years from 1757 to 1947) and Africa (divided amongst European powers in 1898).

Economic doctrine combined well with religion to justify colonialism. While religion provided the rationale – “saving the heathens” – economic theory, with its view of free markets, supposedly took care of their bodies. Accordingly, European powers and the U.S. were assigned the task of providing finished goods to the Third World which would provide raw materials to the First World.

In early periods this division was accomplished by force if Third World people did not agree to their subjugation. Classical colonialism (which was only possible through military power) began to decline after World War II, marked by the contraction of the British Empire and the mostly involuntary giving up of colonies by other European nations. Since then, colonialism shifted from the use of military force to the use of economic policies. One of the main weapons in this new colonialism was loans to the Third World. Eventually these loans gave bankers and institutions such as the World Bank control of Third World economic policies. This strategy continues today, supported by the basic theories of globalization.<sup>3</sup>

## Talking about “the Economy”

Much of the discourse about “the economy” in our media is devoid of any substance. When deliberately done, this is called propaganda. In our media “the economy” is under constant discussion using an extensive vocabulary of metaphors. The economy has a wide repertoire of actions – it can “tank, implode, derail, grow, shrink, stagnate, flatten, boom, explode, soar, collapse, run down, and strengthen.” It is temporal since bad policies can “kill” the economy. If one likes speed metaphors, it can “slow, accelerate and speed up.”

These metaphors give the impression that the economy is some physical creature. A child, overhearing a conversation about the economy, might ask for a picture of one or maybe even a video with examples of it “imploding” or “exploding.” We might tell the child that it’s just an adult’s way of talking about money, and that “economy” is the word we use to describe our income and savings. We could go on

to explain that all these words simply mean we are either getting more money and can buy more things, or we are getting less money and can buy fewer things.

The main indices that “measure” the economy are the Gross National Product (GNP) or the Gross Domestic Product (GDP). These indices are measured in dollars, not feet, miles, temperature, weight, volume or rate of acceleration. They are simply dollar numbers which are composed of the sum of many other dollar values representing particular sources of revenues and expenditures. GNP or GDP cannot “explode” or “tank” but it can increase and decrease by a quantitative dollar amount.

“Growth” is the measure of a positive change in the economy or, in our words, a measure of how much more money is available. “Economic growth” sounds nicer than “making more money” because our Christian tradition states “the love of money (economic growth, goods, and services) is the root of all evil.” But most Americans love money and we have created a culture where money is the measure of success or progress.

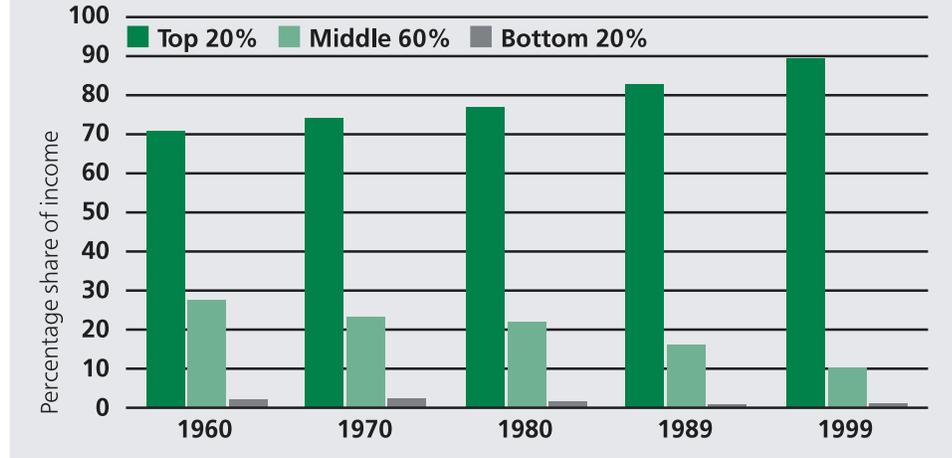
### Growth Economics and Inequity

Economic growth is the first goal of most nations, which should mean that worldwide, as well as nationally, we are all better off financially. But most people in the world (even in the United States) don't feel (and are not) better off, which brings us to how the increasing income from economic growth is distributed.

As we noted earlier, our economic doctrine, inherited from Adam Smith, tells us that self-interest is good and competing in the market place is the way our self-interest is best achieved. Thus competition has become the key cultural value as a way to make money. It follows that, like sports, there will be winners and losers in the money game.

After two centuries of competing we should be able to determine the winners and the losers. Figure 2, showing the distribution of income worldwide, does just that.<sup>4</sup> It illustrates the results of economic competition in the last four decades of the 20th century, the time in

**Fig. 2: Change in World Income Distribution**



which the “growth” economists have been most influential.

Simply put, this graph shows that in the latter half of the 20th century, the distribution of income worldwide has become more and more unequal as the result of our economic policies and competitive values.

The same situation exists in the U.S., although the inequity is not quite as extreme.<sup>5</sup> Here, we lament the “shrinking of the middle class” and the “disappearance of safety nets” as if surprised by the results of decades of unbridled competition for money – a fundamental premise of the doctrine of modern economics.

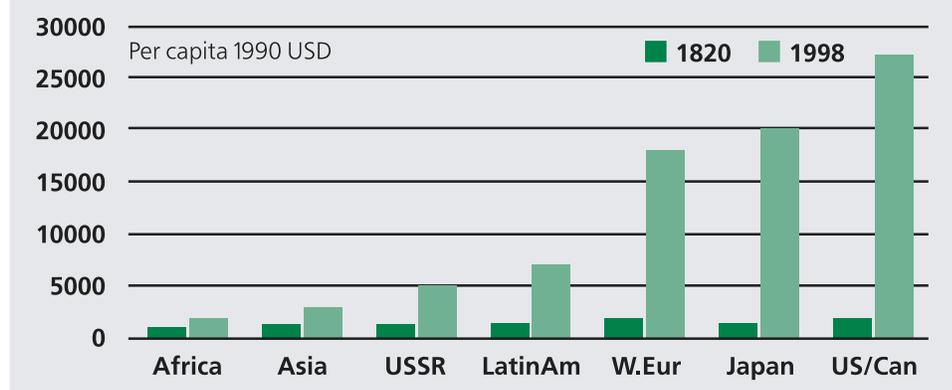
Just since the year 2000, the share of income of those in the upper 20 percent has increased to more than 50 percent, a level not seen since the period just prior to the Great Depression. More significant is the fact that the rate of inequity is increasing over time – more and more

people are experiencing decreasing income as the gains go to the minority at the top.

In the last 40 years, the income share of the poorest 20 percent of the people in the world has decreased almost 50 percent, while the income share of the richest 20 percent has increased by 40 percent. And again, this difference is accelerating, a predictable outcome in a dog-eat-dog world where competition for money is paramount.

The book *The End of Poverty: Economic Possibilities for Our Time* by Jeffrey Sachs (the economist famous for providing the blueprint for the economic disaster that overtook the Soviet Union when that country followed World Bank free market theories) contains a chart (Figure 3) showing the income distribution in the world in 1820 and in 1998. It illustrates the change in the distribution of the world's income in different regions over a period of almost two centuries of free market activity.

**Fig. 3: Wealth by Region 1820/1998**



The huge imbalance is obvious. The metaphors of “trickle down” and “rising tides” fail to convince the third world of our beneficence just as the concern for their souls did not convince the 20 million African Americans enslaved and transported to North America that their lives had improved.

The roughly 3-to-1 ratio between the richer area and the poorer areas of the 1820 period rose to a 13-to-1 ratio by 1998 – and it has increased each year since.

### Rationalizing Inequity

Economists deal with this increasing inequity by using three metaphors. The first is “a rising tide lifts all boats.” This implies that economic growth (recall that this means an increase in the average income of all workers) will provide more wealth to each person. The metaphor is deliberately misleading since each boat on a rising tide increases its elevation the same amount while income increases are not distributed equally – more goes to the rich than the poor. It is more accurate to state that some boats rise and some sink.

The second metaphor is the “trickle down” theory, which argues that if the rich get richer some percentage of their riches will “trickle down” to the less rich, making them better off than they were before. This is an alternative to other redistribution schemes such as charging higher taxes on the higher income earners. On a world-wide basis we can see such “trickling” is minimal, if it exists at all. But economists argue that life is still better for those with low pay because society has advanced to such an extent that even those in poverty are better off than they were in the past, even though they earned a higher percentage of the available income. The poor have not subscribed to this argument.

The third, the “growing pie” metaphor is a modified version of trickle down. It suggests that even if one’s “slice of the economic pie” is decreasing relative to others, the size of the pie itself is increasing so each person increases their income by some amount, even though inequity is also increasing.

All three of these metaphors are used to justify the existence of elites with incredible

wealth and power who take a greater percentage of the available income each year. The economist argues these justifications are reasonable because these “superior humans” create more wealth for the rest of us, no matter how unequal the distribution. Technical entrepreneurs are particularly lauded for this, although many who lost their savings in the NASDAQ fiasco are now less enthusiastic about this theory.

### Economics, Energy and Income

When the economy is discussed along with energy, an additional set of metaphors are used.

- Energy is the “glue” that makes our economy work
- Energy is the “engine” that drives our economy
- Our economy “runs” on oil (or cheap energy)
- We can’t “grow” our economy without cheap oil
- Cheap oil “fuels” our economy

ExxonMobil’s (the world’s largest energy company) web site contains the following analysis:

“Energy use and economic growth are closely linked. The relationship is consistent in all regions and countries and represents the trajectory that developing countries will likely follow as they progress toward industrialization. Modern uses of energy are so closely linked to growth because, among many other advantages, they provide the basis for all modern forms of transportation, are needed for both the materials and the processes used in construction, and underpin the mechanization and improved efficiency of agriculture.”

We have noted that the measure of an economy is the GNP or GDP, and that these indices are essentially measures of our personal income. Economic “growth” means an increase in this personal income. We have also noted that energy consumption and economic growth are linked. Therefore, energy consumption and personal income are related. This means that increased income correlates with increased consumption of oil (as well

as other fossil fuels). Or, in simple words, wealthier people consume more oil; poor people consume less oil. This correlation can be tested by dividing the energy used in various countries or parts of the world by the Purchasing Power Parity (PPP).

The PPP is a normalized measure of per capita income for the nations of the world and used by the UN and the World Bank. The U.S. is the wealthiest member

**Fig. 4: Purchasing Power Parity**

Country/Region	Population (millions)	PPP per capita	Kilograms oil equivalent per capita (1977) KgOE/c	PPP ÷ KgOE/c
U.S.	281	\$36,300	8,076	4.49
ROW	5,096	\$3,824	857	4.46

The U.S. leads the world in oil use per capita, and purchasing power per capita. Its 281 million inhabitants have slightly more purchasing power than the more than 5 billion inhabitants of the Rest of the World.<sup>6</sup>

nation of the 30 nations that make up the Organization for Economic Co-operation and Development (OECD). The 30 OECD member nations represent the richer 18% of the world. The U.S. (with a year 2000 population of 281,000,000) has a PPP of \$36,300. The PPP of the “Rest of the World” (ROW), which includes the more than five billion people not in the OECD, has a PPP of \$3,824. Dividing the PPP by Kilograms of oil used per person per year gives a ratio of approximately 4.5 for both the US and the ROW. This is not a sophisticated analysis but shows the correlation between energy consumption, wealth, and income, thus supporting the argument for linking oil consumption and one’s personal income. One’s personal standard of living is based on how much energy he or she uses.

The so called economic miracles of the past, including the Green Revolution, were based on the increased consumption of oil and other fossil fuels. When these resources begin to decline, our income will decline with them and we will become poorer. Soon the party of the century will be over and in the cold light of dawn we will begin the long process of cleaning up the mess.

## Technology – Fuel-Burning Devices

Neoclassical economists deny any resource limits because “technology will always find a substitute.” Technology, according to them, is the key to continuously improving productivity which, supposedly, results in continuously increasing wealth.

Earlier we noted that technology and economic theory advanced together. Technology is concerned with machines – whether they are space ships, airplanes, cars, furnaces, electric toothbrushes, oil refineries, chemical plants or computers. These machines require a continuous input of energy in the form of fossil fuels, directly (as in the case of gasoline for an automobile) or by electricity generated from fossil fuels (as in the case of the electric toothbrush) and indirectly as feedstock for industrial processes (such as natural gas for ammonia based fertilizers).

Although there have been improvements in the efficiency of technology, these have not slowed the increase in the use of fossil fuels as more machines, larger machines and faster machines are built. Automobile efficiency improvements made in the last 30 years already have provided cars with more than three times the average miles per gallon of today’s autos. But the engine improvements that made that possible are dwarfed by the increase in the number of autos, in auto size, in miles driven, and the increased horsepower of the engine. Consumers do not buy available efficient cars but choose the powerful “sexy” SUVs.

Jeremy Rifkin, in his book *Entropy – A New World View*, says: “The emperor isn’t wearing any clothes.” This is a first recognition of what technology really is. Remove the mystique that surrounds it and what is left, naked and exposed, is a *transformer*. Every technology ever conceived by the genius of humankind is nothing more than a transformer of energy from nature’s storehouse. And, in every case, the energy ends up as dissipated waste, unavailable for future use. The simple fact is that technology never *creates* energy; it only uses up existing available energy.”

We are a people both addicted to and in love with our machines. Our language has evolved so that we even view ourselves

as machines. We say that our brain is “hard-wired” or we like to “connect” with other people. We think it is important to be “wired” to our computers and phones at all times. We have created a society where machine interactions, particularly with cars, TVs, and computers dominate our life and our time as well as our language. Our interactions are with machines rather than with each other. It is difficult for us to even conceive of our lifestyle being curtailed. But this way of life has existed for less than 60 years – a single lifetime – and will be gone within another lifetime.

## Externalities – Economics, Energy and Environment

We are arguing here that economics, growth and energy are closely related. Equally related – although economic theories do not adequately include the larger biological and mineral world – is the environment. Economists deal with environmental degradation which is a result of our “growth” by calling it an “externality.” Externalities are that part of economic theory which, if addressed, would contradict or dispute economists’ models and view of reality. Thus any considerations of the natural world are left out of their calculations. Economists assert that the “free market,” in its infinite wisdom, will solve all such problems.

In general, environmentalists also do not understand Peak Oil and its implications. Like economists, environmentalists have their own paradigm of guilty producers and innocent consumers. Environmentalists need to begin to correlate pollution, toxins and the general degradation of the natural world with the continuous (and increasing) burning of fossil fuels. Greenhouse gases and acid rain are simply two of the outputs of the hundreds of millions of fuel-burning machines. The lifestyle of the typical U.S. environmentalist is only slightly less destructive than that of the average economist. Their incomes will disappear as rapidly as those of the economist when fossil fuels deplete. Economists ignore the environmental problems while environmentalists ignore the deeper causes.

Environmentalists use the term “go green” to describe even the slightest

improvement in the reduction of pollution and toxins. They emote over the splitting of waste water streams into “grey” and “black” without considering energy costs. The use of the word “green” featured prominently in the development of the high-energy intensive method of agriculture (“Green Revolution”), a method with horrible consequences. But until environmentalists grasp the implications of Peak Oil, they will be satisfied to replace a Ford with a Toyota Prius, assuming that the relatively small improvement in mileage will allow our wasteful lifestyle to continue.

## Layoffs, Wage Cuts, and Foreclosures

The language of the economy keeps us from looking at reality. Economic growth is a metaphor that means more money and pollution while economic stagnation or shrinking means less money and a cleaner environment. The implication behind the term “Peak Oil” is the end of economic growth, which will result in pay cuts, layoffs, foreclosures and repossessions. Metaphors such as “collapse” and “tank-ing” can, as the economists would say, “externalize” our experience. “Lay offs” and “pay cuts,” “recession” and “depression” are more understandable.

Many people think we have advanced to some economic nirvana where we will not be affected. Others argue strongly that we “cannot go backwards” as if our materialistic way of life has too much momentum to stop. We forget that the vast majority of people in the world have not advanced to the point where “going backwards” is even an issue.

Cuba and the former U.S.S.R. are two countries that have experienced Peak Oil. Cuba was one of the most industrialized nations in Latin America until their oil supplies were suddenly cut off in 1990 (see May 2004 *New Solutions*). Cuba’s experience was very traumatic and difficult as the country transitioned from an industrial society to a more agrarian one, with a major reduction in standard of living. Still it maintained free medical coverage and education as well as a life span equal to that of U.S. citizens.

Since the Soviet Union’s dissolution in



Cuba, once highly industrialized, has been transformed into a healthy, agrarian society with life expectancy equal to the U.S.

the early 1990s the average life span of Soviet men has declined from the low 70s to 59. There were 10 million excess male deaths associated with the “collapse” of the Russian economy. According to Dr. Douglas Reynolds, American energy and oil economist, this collapse was due as much to the Russian oil production peak of 1987 as it was to excessive military expenditures – the more popular view.

## What's in Store for Us?

It is possible that advanced industrial nations have achieved some level of technical or social development that will minimize the effects of Peak Oil. A more likely possibility is that they could suffer as much as poorer nations. Possibly a people with more wisdom might have already devised a way of living not dependent on increasing fossil fuel consumption.

In the 1970s, after the first oil crisis, the U.S. could have made the decision to choose a qualitative way of life rather than a quantitative one. Massive amounts of investment could have been made in wind and solar energies. Cars could have been made much smaller and more efficient. Houses could have been built both smaller and with better insulation. Government funding might have gone to supporting family farms instead of industrial agribusiness. President Reagan might have increased the number of solar panels on the roof of the White House instead of removing them when he took office. His stated world view was one where everyone in American had a chance to get rich, which we now know meant burning more and

more fossil fuels and increasing inequity.

It is unlikely that U.S. citizens will change without suffering. Since the 1970 U.S. oil production peak, Americans have consistently bought larger homes, larger cars, driven more, flown more, eaten more energy-expensive meat, and, in general, consumed with no limitations.

There has been only minimal investment in sustainability. Most investments have been in products and processes that require more fossil fuel. The U.S. has no low-energy infrastructure and no plan. Thus when world Peak Oil occurs, the falling tide will lower all boats (sinking many of them), the “trickle down” will dry up, and the metaphorical pie will shrink. The safety net, a metaphor for some type of minimal government income support for the poor, may be completely shredded, leading to great suffering and early deaths.

Earlier, we quoted Colin Campbell's prediction that declining oil supplies will remove the confidence in perpetual growth on which the world's Financial System depends. When people understand that our incomes will also be in decline, borrowing and lending will decline as well. The result will not simply be a decline of 3-5% per year (the estimated rate of oil production decline). Capital we thought we had saved from productive growth will shrink, because much of it is actually “growth speculation,” such as stocks and inflated home prices. High mortgage payments, natural gas bills and gasoline costs will make all commodities less and less affordable.

In the May 2005 newsletter of the Association for the Study of Peak Oil and Gas (ASPO), Colin Campbell notes: “It is becoming evident that the financial and investment community begins to accept the reality of Peak Oil, which ends the First Half of the Age of Oil. They accept that banks created capital during this epoch by lending more than they had on deposit, being confident that Tomorrow's Expansion, fuelled by cheap oil-based energy, was adequate collateral for Today's Debt. The decline of oil, the principal driver of economic growth, undermines the validity of that collateral....The scene is set for the Second Great Depression.... It is a situation without precedent.”

## What Next – A Steady State Society

Many may approach the changes coming due to Peak Oil with fear and dread. Americans have long ignored the four serious defects of neoclassical economics

1. It creates gross inequity.
2. Environment degradation worsens.
3. Resource wars are inevitable.
4. Community is destroyed.

Fortunately there is a new breed of renegade economist whose focus is on community-based steady-state economics. Examples are Herman Daly, author of *For the Common Good*, Richard Douthwaite, author of *The Growth Illusion* and *Short Circuit*, Michael Perelman, author of *The Perverse Economy*, and Michael Alpert, author of *Participatory Economics*.

This new community-centered version of economics is too complex and rich to be summarized in this article. It does not hold with the principle that individual pursuits will always benefit the community nor that resources are infinite. Rather, the community is held as more important than the self-centered pursuits of the individual. Cooperation is preferred to competition.

Locality will be a vital part of this new economics, which implies local design, local manufacturing, local savings, local investment, and local food production. It means the decline of transnational corporations and the rebirth of locally owned and operated businesses. The last sentence of Perelman's book, *The Perverse Economy*, states “We should move as quickly as possible to a more democratic, more egalitarian, more sustainable society before it is too late.”

Peak Oil is upon us and the change in society has begun. Burying the old economic theories, abandoning products that require excessive burning of fossil fuels, drastically curtailing our dependence on oil-burning machines, and beginning to rebuild local infrastructures for food and services is the first step.

*For more information about Peak Oil and Community Solutions, call us at 937-767-2161, or visit us online at [www.communitysolution.org](http://www.communitysolution.org).*

## New Solutions

is published by Community Service, Inc. under its program, The Community Solution. Community Service, Inc., a non-profit organization, has been studying and promoting small local community for more than 60 years.

**To receive New Solutions on a regular basis**, please send your tax-deductible contribution of \$25 (or more) to Community Service, Inc., P.O. Box 243, Yellow Springs, OH 45387. Your contributions will help us continue this work.

**To receive regular email communications**, send us an email at [join@communitysolution.org](mailto:join@communitysolution.org).

© 2005 Community Service, Inc. All rights reserved.

## Resources

### Peak Economy References

1. From "Oil-based Technology and Economy, Prospects for the Future," The Society of Danish Engineers, April 2004.
2. "Uneconomic Growth in Theory and in Fact," Herman E. Daly, The First Annual Feasta Lecture, April 26, 1999.
3. John Perkins, in his book, *Confessions of an Economic Hit Man*, describes in detail how this was achieved.
4. Change in World Income Distribution; <http://www.poorcity.richcity.org/entundp.htm>
5. Share of Aggregate Income Received by Each Fifth and Top 5 Percentiles of Households (All Races): 1967 to 2001; <http://www.census.gov/hhes/income/histinc/h02.html>

6. CIA World Fact Book and World Development Report 2000/2001.

### Other Recommended Resources

- The Small Community*, Arthur Morgan, 1942 (available from CSI)  
*The Long Road*, Arthur Morgan, 1936 (available from CSI)  
*The Unsettling of America: Culture and Agriculture*, Wendell Berry  
*The Land Report*, A publication of The Land Institute, [www.LandInstitute.org](http://www.LandInstitute.org)  
*Earth in Mind: On Education, Environment, and the Human Prospect*, David Orr, 1994  
*Communities Magazine, Journal of Cooperative Living*, published by the Fellowship for Intentional Communities, (816) 883-5545, [www.store.ic.org](http://www.store.ic.org)

**Diane Christian  
Richard Heinberg  
John Ikerd  
Jan Lundberg  
Pat Murphy  
Megan Quinn  
Robert Waldrop**

## The Second U.S. Conference on Peak Oil and Community Solutions

**Sept. 23-25, 2005 Yellow Springs, Ohio**

For preliminary conference information, call us at 937-767-2161, or visit us online at [www.communitysolution.org](http://www.communitysolution.org).

You may also contact us through our websites: [www.communitysolution.org](http://www.communitysolution.org) and [www.smallcommunity.org](http://www.smallcommunity.org).



A program of Community Service, Inc.

P.O. Box 243  
Yellow Springs, Ohio 45387  
T: 937.767.2161  
[www.communitysolution.org](http://www.communitysolution.org)

Return Service Requested

Nonprofit Organization  
U.S. Postage  
PAID  
Permit No. 51  
Yellow Springs, Ohio